Green Horse Response to Comments

A letter was mailed to interested parties, organizations, tribes, and government agencies and a legal notice was published in the *Lewiston Morning Tribune* on February 22, 2020 to announce the combined scoping and 30-day comment period for the Green Horse project. The Green Horse proposed action and supporting information was made available on the Nez Perce-Clearwater National Forests website at https://www.fs.usda.gov/project/?project=57152 at this time along with supporting documents.

Summary of Public Response

Ten comments were received in the form of emails and letters as instructed in the letter and legal notice before the Green Horse 30-day comment period ended. Each comment letter was assigned a reference number by the comment analysis data base (Table 1).

Table 1. List of comments received on the Green Horse project

Letter Reference Number	Date	Name/Organization
1	February 25, 2020	Lisa Eldridge
2	March 7, 2020	Gary Bowling
3	March 23, 2020	Shannon Wheeler/Nez Perce Tribal Executive Committee
4	March 5, 2020	Harry Jageman
5	March 16, 2020	Tom Partin/American Forest Resource Council
6	March 16, 2020	Brad Smith/Idaho Conservation League
7	March 16, 2020	James Wassmuth/Evergreen Forest
8	March 17, 2020	R. Skipper Brandt/Board of Idaho County Commissioners
9	March 20, 2020	Tera King/Idaho Forest Group
10	March 20, 2020	Gary MacFarlane/Friends of the Clearwater

Comments

The following section contains specific written comments and their disposition in the environmental assessment and draft decision notice. To minimize duplication, comments addressing essentially the same topic or concern have been consolidated among the various letters. Each comment contains a citation to the comment letter(s) where contained. Specific written comments are defined by 36 CFR §218.2:

Written comments are those submitted to the responsible official or designee during a designated opportunity for public participation (§218.5(a)) provided for a proposed project. Written comments can include submission of transcriptions or other notes from oral statements or presentation. For the purposes of this rule, specific written comments should be within the scope of the proposed action, have a direct relationship to the proposed action, and must include supporting reasons for the responsible official to consider.

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Comment Summary and Response

Supportive

- 1. I am very much in favor of this projected sale. Much more of the Elk City area needs work also. It is way to thick and so much dead timber. This is a great start and hopefully much more will be done in the next few years ([1-1])
- 2. I have pictures of the area around Elk City from the air, taken summer 2019. I understand you cannot make a definitive, conclusive determination of the damage from aerial photos.....but they look pretty bad. Also have pictures taken today (7 March 2020) from the ground of lots of trees with dead tops and branches with all needles gone from the tips. All sizes of trees. If 20% of the affected trees die, that's survivable. If 50% die, that would be tragic, if 80% die, it could be catastrophic for those of us who live and work in the area.....My neighbor told me today he had 2 of the moths in his house today......their back! I support your project 100%, it should of been started earlier and should be bigger, much bigger. ([2-1])
- 3. AFRC supports the Purpose and Need for the project which includes:
 - 1. Improve forest health and provide a sustained yield of resource outputs as directed in the Forest Plan by:
 - Reducing the extent of insect and disease infection and
 - Altering species composition to include more early seral species that are less susceptible to disease infection.
 - 2. Reduce hazardous fuels and wildfire risk:
 - Along roads for public and firefighter safety, including ingress/egress;
 - *To protect timber resources:*
 - To maintain recreational opportunities within the area. ([5-1])
- 4. AFRC supports the Forests efforts to quickly treat the hemlock looper infestation areas as early as 2022. Outbreaks such as these tend to linger and continue to cause mortality for many years especially with the dense stands of shade tolerant species found in the area. AFRC further supports the Forest using regeneration harvests on 1,513 acres to both salvage the dead and dying timber and to reduce the fuels loading in the areas. The current dense stands of shade tolerant species (primarily grand fir) creates a very favorable habitat for the hemlock looper to flourish. ([5-2])

Response: Thank you for your comment.

5. In order to implement the needed treatments some regeneration units will need to be larger than 40 acres. Table 2 below outlines the specific units that are larger than 40 acres in size. (See table 2 in

- comment letter) The total acreage in these units is 1,327 acres. AFRC supports the Forest requesting approval from the Regional Office to create openings larger than 40 acres in these 13 units. As mentioned above, the regeneration work will help with forest health, fuels reduction and provide early seral habitat for deer and elk. ([5-3])
- 6. AFRC also supports the Forest using shaded fuel breaks up to 150 feet on both sides of the roads. These breaks can both address forest health issues and reduce the risk of wildfire along routes that are needed for ingress and egress into the National Forest. The shaded fuel breaks may also be used within the Idaho Roadless Areas (IRAs) located within the project on approximately 180 acres. AFRC believes this is favorable to get these areas treated during this entry to improve safety along the travel corridors. ([5-4])

Response: Thank you for your comment. Units with opening greater than 40 has decreased to ten.

7. In reviewing the scoping document, AFRC believes the Forest has done a good job of analyzing the Regional Forester Sensitive Species including: black-backed woodpecker, flammulated owl, fisher, gray wolf, mountain quail, and a variety of songbirds. In addition, this project will protect the Forest Management Indicator Species including: northern goshawk, pileated woodpecker, American marten, Rocky Mountain Elk, and shires moose. While protecting these species impacts on the ground management opportunities, taking proper steps to protect these species will limit the opportunity for litigation. Again, we think the Forest has done a good job in this respect. ([5-8])

Response: Thank you for your comment. The EA includes direct, indirect, and cumulative effects of both sensitive and Forest Plan management indicator species (EA pp. 14-68).

- 8. Evergreen Forest would like to say that we support your proposed Green Horse project. We support this project for the following reasons:
 - 1. Timely removal is necessary to remove trees while they still have sawlog value.
 - 2. Reduce fire hazard for residents of Elk City. I remember about 5 years ago when the Falls Creek Fire required some residents of Elk City to pack up and leave town.
 - 3. Jobs for local employees of the timber industry.
 - 4. Move forest towards an early-seral species. Planting more DF and WL should make the Forest more resistant to insects and disease.

We also support your proposal to use temp roads. ([7-1])

Response: Thank you for your comment

9. We appreciate your reference to the Idaho County Natural Resource Plan ICNRP 2016. The introduction you provided at our meeting was helpful to understand your proposal. We support the proposal to address hazardous fuels and wildfire risk. Planting the roadside units to a lower density should help lower future risks. Coordination shown on Page 8, AM-1 with the local organizations for access will be a critical need. As you note, where snowmobile routes coincide with Road 443 American River and 464 Boundary Ridge will generate a lot of interest. We support and encourage the regeneration harvest proposed within the West Meadow Creek roadless area. ([8-1])

Response: Thank you for comment. The harvest proposed in the West Meadow Creek roadless area is harvest of dead/dying trees only (EA pp 8, 62-68).

Need for the Proposal

10. The Proposed Action references the Clearwater Basin Collaborative Restoration Strategy, Selway-Middle Fork Clearwater Subbasin Assessment, Nez Perce Clearwater National Forest Land Management Plan, and Idaho County Natural Resources Plan. The Forest does not reference the Nez Perce Tribe Department of Fisheries Resources Management Plan which emphasizes the protection of important Treaty resources present in the Project area.

The Nez Perce Tribe Department of Fisheries Resources Management will protect and restore aquatic resources and habitats. Our mission will be accomplished consistent with the Nimiipúu way of life and beliefs, which have the utmost respect for the Creator, for all species, and for the past, present, and future generations to come. Our mission will be consistent with the reserved rights stated within the Nez Perce Tribe's 1855 Treaty (Nez Perce Tribe Department of Fisheries Resources Management Plan 2013-2028, (2013) at 26, available at https://damsense.org/wpcontent/uploads/2016/05/Nez-Perce-Fish-Management-Plan-2013-2028.pdf (last visited Mar. 10, 2020).). ([3-19)

Response: The "overarching habitat condition objective..." of the Nez Perce Department of Fisheries Resources management plan is "...striving to re-establish properly-functioning, self-sustaining, healthy streams, watersheds and ecosystems that are so essential to rebuilding our runs" (p. 41). The management plan features a matrix of pathways and indicators to "assess whether habitat condition goals are being met" (NPT management plan, pg. 41). The matrix is nearly identical to the NOAA matrix of pathways (NOAA 1998) that the forest uses to assess habitat condition as high, moderate or low for Chinook, steelhead, and bull trout in the Clearwater Basin. Where the tribe's management plan describes habitat condition as properly-functioning, the NOAA matrix of Pathways and Indicators describes it as "high quality". Most indicators (e.g. large wood, pools and shade) in the matrix will remain unchanged from project activities due to the implementation of PACFISH buffers. Indicators that may be affected by project activities are discussed in the watershed and aquatic species sections of the EA. The Green Horse project would not retard the achievement of a properly-functioning watershed as described by the matrix of pathways and indicators in the tribes fisheries management plan, mainly due to the retention of PACFISH buffers, mitigation measures, and project design features (document 11-004).

- 11. Desired conditions are based upon the Forest Plan. They must go through both NEPA and NFMA for compliance. Only the Nez Perce National Forest Plan has gone through NEPA and a decision document. The proposed action refers to a CBC "partnership" in developing the project, "the desired conditions in the Selway-Middle Fork Clearwater River Subbasin Assessment" and "the goals and objectives of the Idaho County Natural Resources Plan," none of which have gone through the proper NEPA channels. PA at 3. Aside from violating NEPA and NFMA, this backroom deal making is contrary to participatory democracy. Such tiering to a non-NEPA document is not consistent with NEPA, NFMA or the Nez Perce National Forest Plan. 40 C.F.R. § 1502.20. It doesn't matter whether those "decisions" were made elsewhere. They must be adopted by the forest plan to be legitimate as desired future conditions. ([10-4)
- 12. As a member of the Clearwater Basin Collaborative, Idaho Forest Group (IFG) is a strong supporter of the goals of the Selway-Middle Fork Collaborative Forest Landscape Restoration Project and is pleased that the Forests are bringing the Green Horse project forward consistent with the goals and desired conditions of that project. Idaho is ranked 1st nationally for percentage of trees at risk of a 25% or greater basal area loss from 2013-2027 as result of insect and disease mortality (NIDRM 2012) with inevitable wildfire issues as a direct result. Because most of that risk occurs on national forest lands and the Green Horse project is in the heart of the area most at risk, the purpose and need for the project are not only appropriate, but critical to the health and resilience of the landscape. ([9-1])

Response: The only document the Green Horse EA project is tiered to is the Nez Perce Forest Plan. There is no other documentation in the project record that the Green Horse project is tiered to. As stated in the proposed action scoping document, the Green Horse project is consistent with goals in the Selway-Middle Fork Clearwater River Subbasin Assessment (USDA 2001). The reference to the Idaho County

Natural Resources Plan states that the Green Horse project is consistent with the goals and objectives of this plan as well. The Green Horse project was developed to follow the management direction of the Nez Perce Forest Plan and complies with all relevant goals, objectives, and standards.

13. The Forest Service neglected to disclose exactly what desired conditions and objectives in the forest plan are at issue. The Nez Perce Forest Plan does not have "desired conditions," so we are unclear as to what you mean by that. The Forest Service, except in the instance of water quality, has it cited "objectives" that make this project necessary, so we don't know what you mean by that, either. ([10-6])

Response: Desired future conditions are Chapter II of the Forest Plan on pages II-13-15 and applying both forest-wide standard and management areas standards are expected to achieve these desired conditions.

14. The analysis predicts a positive impact to the black-backed woodpecker of 570-acres of prescribed burning. One has to ask the question, why there is any need for more prescribed burning given the recent wildfire? ([4-18])

Response: The for prescribed fire is to reduce fuel loading, maintain or create different habitats for wildlife, reduce the chance of crown fire, and help create a fire adapted landscape.

Public Involvement

15. I am disappointed that the Forest Service has elected to combine the scoping and comment period for this project and only allow only 30 days to comment on the Preliminary Environmental Assessment. This is just another example of your efforts to stymie meaningful public comment and short change the environmental review process. ([4-1])

Response: The Forest Service requires scoping on all proposed actions. Because the nature and complexity of a proposed action determine the scope and intensity of analysis, no single scoping technique is required or prescribed (36 CFR 220.4(e)(2)). NEPA (40 CFR 1501.7) and Forest Service regulations (26 CFR 218.25) require the responsible official to provide opportunities for public comment. Comments on the Green Horse proposed action were accepted for 30 days beginning on the first day after the date of publication of the legal notice per 36 CFR 218.25 (a)(1)(i). Forest Service regulations further require opportunities for members of the public to object to the draft decision if they previously submitted written comments on the project (36 CFR 218).

16. The PA (at 4) abdicates the agency roles by stating, "The Green Horse project was presented at a public meeting held by the Clearwater Basin Collaborative." The CBC is not a transparent group. We've included a couple of webpages to show you that there is no public information about who is currently on this collaborative and whether they attend meetings. In addition to a lack of transparency, the CBC is not authorized to administer our national forests and is not in any way accountable to the public. While the Forest Service held a meeting in Elk City, no others were held in less remote and more populous areas. ([10-8])

Response: Membership of the collaborative group is outside the scope of this project. The Idaho County Free Press and the Clearwater Basin Collaborative website provided information to the public on the meetings held to present projects on the national forest. The Forest Service did not hold a meeting in Elk City; rather, Forest Service staff were invited to a community meeting.

17. We caution your use of collaboratives to develop projects because science should inform the development of these projects and can often be lost in collaboratives that gather self-interested

stakeholders with little or no scientific expertise. For example, you have suggested that you have collaborated with the CBC in developing the "comprehensive restoration strategy" that lead to this project. To the best of our knowledge (because the CBC website has this info hidden) Idaho County is represented through an elected official in the Clearwater Basin Collaborative, yet there is nothing scientific about the county's position to log (Hedberg, "Idaho County to seek voters' 'thoughts and prayers' on wilderness," Lewiston Tribune, Sept. 5, 2018.). The member of the collaborative that doesn't have a resource-harvesting or user-based interest is the Forest Service, and the Forest Service should introduce science that informs projects and examines the impacts of the proposed project under the National Environmental Policy Act. But, scientific independence is the key to scientific credibility (See generally L.F. Ruggerio, Eco Report, Scientific Independence: A Key to Credibility pp. 1,2 4 (2007)). Because of the Forest Service's motivations for participating in collaboratives, you undermine your credibility as an independent scientific voice in both the development and analyzation of proposed projects. ([10-9])

Response: Membership of the collaborative group is outside the scope of this project. The Green Horse project considers the most current and applicable science.

Proposed Action

18. The Forest may benefit from using the updated landslide prone layer for delineating areas to drop to streamline project development. ([3-25])

Response: The Forest will use the landslide prone layers, including the resampled layer provided by the Nez Perce Tribe Watershed Division for identifying potential areas of concern and for assessing project effects. Ultimately, project decisions about landslide prone areas will be made in the field during unit layout to determine which areas should be buffered from harvest.

19. Once concern we do have is the time period it may take to get this project implemented. Grand Fir, Alpine Fir and Spruce deteriorate quickly once they are dead, so hopefully you can get this project implemented in a short time period. ([7-2])

Response: The timber sale is scheduled to sell during the summer of 2022. Timber harvest would be completed within 5 years following the timber sale. The timeframe given with the proposed action has to account for all activities proposed.

20. The PA also states, logging would "occur over approximately the next 12 years; landscape burning would follow and would occur over approximately the next 20 years; with subsequent maintenance burning occurring every five to ten years." PA at 4. This is well beyond the useful life of a site-specific NEPA document and is a violation of NEPA. ([10-7])

Response: Harvest, site preparation for planting, and planting would all occur over the next 12 years beginning soon after the timber sales sells during the summer of 2022. NEPA does not set timeframes for actions to occur. NEPA requires that an EA describe the impacts of the proposed action . . . in terms of context and intensity (36 CFR 220.7(b)(3)(iii). The environmental impacts of the proposed action (as described in the document that was available for combined scoping and 30-day comment period and modifications that are listed in the proposed action in the EA) is located in the EA with supporting documentation in the project record. Further, the FONSI has documented that impacts of the proposed action are not significant. If conditions change as any component of the proposed action is to be implemented, a review and documentation of this new information will be competed per FSH 1909.15, Ch. 10, Sec. 18.1.

21. Overall, the proposed action addresses an area in need of active management for multiple reasons.

We'd like to see an in-depth analysis of the no-action alternative given current forest health conditions and the cumulative effects resulting from the expansive recent fire activity in the general vicinity. Of particular interest would be the potential for reburn due to the high fuel loading and continued insect and disease-caused mortality. This could have very serious negative effects on the ash cap soils, fish, and wildlife. ([9-5])

Response: Effects of the no action and cumulative effects of the proposed action have been analyzed and are documented in the Green Horse EA (pp. 13-67).

22. A review of the Proposed Action harvest unit boundaries indicates that PACFISH buffers may not have been applied to all perennial streams within the Project area. ([3-24])

Response: Due to data limitation in our GIS system, the location and extent of all streams is not known. It is not uncommon to find new streams during layout at which point they are buffered appropriately per PACFISH (document 11-004).

23. The Proposed Action states that units may be smaller at layout than what will be analyzed in the environmental assessment. In the Forest's recent experience with similar projects, what is the percentage of layout units that have been smaller than the analyzed units? What is the potential for the layout units to stray beyond the boundaries analyzed in the environmental assessment? ([3-8])

Response: Nearly every unit ends up being smaller than the proposed units. In rare instances a laid out unit may be the same size as planned. In general 30 -50% of the acres are lost during layout. Usually this is the result of applying PACFISH buffer to water and landslide prone areas that weren't known during the analysis and stands that don't meet the prescription or are not financially feasible. Also, limitations of logging systems and the transportation system often result in fewer acres being laid out than were proposed. While the potential is low, should circumstance arise in the field that could result in laying out areas beyond the NEPA boundary the line officer would review those areas and determine whether they are within the scope of the decision or if additional analysis is needed.

- 24. It does not appear that any of the proposed treatment units would entail post-fire salvage logging. However, the Forest Service should clearly indicate whether or not a post-fire salvage would occur. It looks like none of the units were affected by the Wash Fire, but we are not sure. ([6-7])
- 25. The scoping document alludes to the 2015 Wash Creek wildfire (36,853-acres) and suggests there is plenty of black-backed woodpecker habitat in or near the project area. The analysis suggests that 100-acres of roadside salvage of black-backed woodpecker habitat would remove a "minor component of the woodpecker's habitat." It is unclear if this salvage operation is in previously burnt stands or currently unburnt areas. ([4-17])

Response: Post fire salvage is not planned with this project. Please see that there is no reference to post fire condition in the forest vegetation existing condition or within the proposed action. Black-backed woodpecker habitat affected by the project has been clarified and is approximately 68 acres (EA. p. 28).

Mitigation Measures

26. The Tribe requests that the Forest provide data in the Project record to show that the mitigation measures in the Proposed Action have been validated for effectiveness by field surveys and monitoring. The Tribe also requests that the Forest monitor the mitigation measures for effectiveness during and after implementation. ([3-9])

Response: The mitigation measures included in the proposed action are tied to a potential effect of the proposed action. The effectiveness of each mitigation measure is included in Table 2 in the EA and the

rationale for applying the mitigation measure is provided in the resource effect analysis (if applicable). The mitigation measures have been developed from past projects and professional experience, have been verified by field surveys and monitoring, and would be used to limit possible adverse effects to soils, water quality, fish and wildlife habitat, and culturally significant areas. Best Management Practices (BMPs) would be followed as stipulated by the Idaho Forest Practices Act. Idaho water quality standards regulate non-point source pollution from timber management and road work activities through the application of BMPs. The Nez Perce-Clearwater National Forests has excellent records of successful implementation of BMPs. Between 1990 and 2002, the Clearwater National Forest had a BMP implementation rate of 95 to 100 percent rate of effectiveness (USDA 2003, 2004, 2008, 2009; Snyder, 2017). The same BMPs would be applied to the Green Horse project and are expected to have similar results. Mitigation measures are implemented through either timber sale prep/layout or through mandatory contract provisions.

Alternatives

27. O'Hara Creek is lacking in large woody debris for channel complexity, hydrology and improved fish habitat. The Tribe encourages the Forest to try to identify sources of large wood to use for future large wood placement restoration projects. ([3-28])

Response: Thank you for the comment and reminder. We agree that beginning to more routinely think through opportunities to find wood suitable for large wood placement is an important part of planned projects and routine administrative site maintenance.

28. Has the Forest Service looked at simply closing or decommissioning some of the roads it has represented to be hazard roads? ([10-1])

Response: The roads analysis resulted in project area roads are needed for future management for purposes including but not limited to providing access to manage plantations, fire suppression, etc. Future management of this area is needed and is directed by Forest Plan management areas 12, 16, 17 to manage timber production while providing for other multiple uses and resources that also includes improving the quality of winter range for big game by timber harvest and prescribed burning.

Regulatory Framework

- 29. Since time immemorial, the Tribe has occupied and used over 13 million acres of land now comprising north-central Idaho, southeast Washington, northeast Oregon, and parts of Montana. Tribal members engaged in fishing, hunting, gathering, and pasturing across their vast aboriginal territory, and these activities play a major role in the subsistence, culture, religion, and economy of the Tribe. As the Forest is aware, this Project is located entirely within the Tribe's aboriginal territory subject to the rights the Tribe reserved, and the United States secured, in the Treaty of 1855 (Treaty with the Nez Perces, June 11, 1855, 12 Stat. 957).([3-35])
- 30. The Project is also located within the Tribe's area of exclusive use and occupancy, as adjudicated by the Indian Claims Commission (Nez Perce Tribe v. United States, Docket #175, 18 Ind CL. Comm. 1), and encompasses areas of cultural and spiritual significance to the Tribe. As a result, the Tribe considers the protection of its treaty-reserved rights, and other rights, and interests, to be a paramount obligation of the Forest when implementing this Project. The Forest has a trust responsibility to ensure that its actions, including implementation of this Project, are fully consistent with the 1855 Treaty, executive orders, departmental regulations, and other federal laws implicating the United States' unique relationship with the Tribe. ([3-36])
- 31. Treaty tribes, such as the Nez Perce Tribe ("Tribe"), are recognized as managers of their treaty-reserved resources (U.S. v. Washington, 384 F. Supp. 312, 339-40, 403 (W.D. Wash. 1974).). As a manager, the Tribe devotes substantial time, effort, and resources to the recovery and

comanagement of Treaty-reserved resources.

As fiduciary, the United States and all its agencies owe a trust duty to federally recognized tribes to protect their treaty-reserved resources (See, United States v. Cherokee Nation of Oklahoma, 480 U.S. 700, 707 (1987); United States v. Mitchell, 463 U.S. 206, 225 (1983); Seminole Nation v. *United States*, 316 U.S. 286, 296-97 (1942).). This trust relationship has been described as "one of the primary cornerstones of Indian law," (Felix Cohen, Handbook of Federal Indian Law 221 (1982).) and has been compared to the relationship existing under the common law of trusts, with the United States as trustee, the tribes as beneficiaries, and the property and natural resources managed by the United States as the trust corpus (See, e.g., Mitchell, 463 U.S. at 225.). All executive agencies of the United States are subject to the federal trust responsibility to recognize and uphold treaty-reserved rights. Executive agencies must also protect the habitats and resources on which those rights rest, since the right to take fish and other resources reserved by the Tribe presumes the continued existence of the biological conditions necessary to support the Treaty-reserved resources. (See, Kittitas Reclamation Dist. v. Sunnyside Valley Irr. Dist., 763 F.2d 1032 (9th Cir. 1985), cert. denied, Sunnyside Valley Irr. Dist. v. United States, 474 U.S. 1032 (1985).). Forest Service Manual ("FSM") 1563.8b specifically states that the Forest Service "shall administer lands subject to off-reservation treaty rights in a manner that protects Indian tribes' rights and interests in the resources reserved under treaty." Further, FSM 1563.03 directs the Forest Service, among other responsibilities, to "[i]mplement Forest Service programs and activities consistent with and respecting Indian treaty and other reserved rights and fulfilling the Federal Government's legally mandated trust responsibilities with Indian Tribes." ([3-37])

Response: American Indian tribes are afforded special rights under various federal statutes: NHPA; NFMA; Archaeological Resources Protection Act of 1979 (ARPA) (43 CFR Part 7); Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (43 CFR Part 10); Religious Freedom Restoration Act of 1993 (P.L. 103141); and the American Indian Religious Freedom Act of 1978 (AIRFA). Federal guidelines direct federal agencies to consult with tribal representatives who may have concerns about federal actions that may affect religious practices, other traditional cultural uses, or cultural resource sites and remains associated with tribal ancestors. Any tribe whose aboriginal territory occurs within a project area is afforded the opportunity to voice concerns for issues governed by NHPA, NAGPRA, or AIRFA.

Executive Order 13175 "Consultation and Coordination with Indian Tribal Governments;" Executive Memo, April 29, 1994 "Government-to-Government Relationship;" and Executive Memo, September 23, 2004, "Government-to-Government Relationship" recognize the unique legal relationship between the United States and Indian tribal governments and also direct Federal agencies to have a process to ensure meaningful and timely input by tribal officials.

Trust responsibility arises from the United States' unique legal relationship with Indian tribes. It derives from the Federal Government's consistent promise, in the treaties that it signed, to protect the safety and well-being of the Indian tribes and tribal members. The Federal Indian trust responsibility is now defined as a legally enforceable fiduciary obligation, on the part of the United States, to protect tribal lands, assets, resources, and reserved rights, as well as a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes. This responsibility requires that the Federal Government consider the best interests of the Indian tribes in its dealings with them and when taking actions that may affect them. The trust responsibility includes protection of the sovereignty of each tribal government (FSM 1563.8b 2). The Forest Service best serves the Federal Government's trust responsibility by:

- Ensuring our actions never diminish the rights of Indian tribes and tribal members;
- Ensuring Forest Service program benefits reach Indian tribes and tribal communities;

- Observing and enforcing all laws enacted for the protection of tribal cultural interests;
- Observing the principles of consultation whenever our policies, decisions, or other actions have tribal implications; and
- Treating NFS resources as trust resources where fiduciary rights exist.

The Green Horse project area is located within ceded lands of the Nez Perce Tribe. These ceded lands are federal lands within the historic aboriginal territory of the Nez Perce Tribe which have been ceded to the United States. In Article 3 of the Nez Perce Treaty of 1855, the United States of America and the Nez Perce Tribe mutually agreed that the Nez Perce retain the following rights:...taking fish at all usual and accustomed places in common with citizens of the Territory [of Idaho]; and of creating temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing horses and cattle...

The Nez Perce-Clearwater National Forest is committed to fulfilling the Forest Service's trust responsibilities to Native Americans, to honoring rights reserved in the Nez Perce Treaty of 1855, and to strengthening our government-to-government relationship with the Nez Perce Tribe. The Forest Service manages and provides access to ecosystems that support Tribal traditional practices. The Green Horse project has been discussed with the Nez Perce Tribe staff at quarterly staff-to-staff meetings since 2019.

32. We don't see how this logging proposal fits win the Nez Perce National Forest Plan. It is not removing a few trees, rather proposing regeneration (read clearcut or nearly so) logging on 1,513 acres (PA at 4), some of which are within management areas such as MA 21 (moose habitat) (PA at 2 and 3), which doesn't allow such clearcuts. ([10-11])

Response: MA 21 only restricts harvest on slopes greater than 35%. Documentation included in the EA as well as the project conclude that the Green Horse project is in compliance with the Nez Perce Forest Plan (document 11-004, 11-008).

33. According to the legal announcement in the Lewiston Morning Tribune, "The Green Horse project analysis is anticipated to be completed in an environmental assessment" and then "may be subject" to the objection process. Why wouldn't an EA be subject to the objection process? Further, an EIS seems more appropriate for reasons we detail in the following comment. Is the reason the Forest Service has proposed this for an EA because the Regional Office instructed all projects to be EAs in a memo signed last year? EAs cannot be decided politically—this violates the spirit and intent of NEPA. ([10-3])

Response: If no comments are received during the designated comment opportunities, projects may not be subject to the objection process (36 CFR 218.4). The Green Horse project will not have significant effects on the quality of the human environment considering the context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared. The Finding of No Significant Impact of the Green Horse project proposed action is located in the project record.

- 34. The incomplete scoping document does not include important information on several topics, including specialist reports for soils, hydrology, fisheries, soils and landslide risk. Without information on these topics it is very difficult for the reviewer to make meaningful comments on the proposal. ([4-2])
- 35. If an EA is prepared, will the public be allowed to comment on the analysis of impacts? If not, we reserve the right to raise those issues in an objection. ([10-22])
- 36. We look forward to the EA that you have represented through the legal notice that the public is to expect ([10-42])

Response: The Forest Service requires scoping on all proposed actions. Because the nature and complexity of a proposed action determine the scope and intensity of analysis, no single scoping technique is required or prescribed (36 CFR 220.4(e)(2)). Forest Service regulations further require opportunities for members of the public to object to the draft decision if they previously submitted written comments on the project (36 CFR 218). The Green Horse EA that includes the direct, indirect, and cumulative effects as well as the project record will also be available as the draft decision is published for the objection period. The 30-day comment period that is required for an EA began on February 22, 2020 with the publication of the legal notice in the Lewiston Morning Tribune (36 CFR 218.25 (a)(1)(i)). The EA will be made available along with the draft DN with the publication of a legal notice in the Lewiston Morning Tribune to announce the beginning of the objection filing period where this provides the opportunity for members of the public to object to the draft decision if they previously submitted written comments on the project (36 CFR 218).

Models/Monitoring

37. There is no evidence of anything that approaches adequate monitoring of MI and TES as required by the forest plan on the relevant public webpages. How can this project comply with the Nez Perce National Forest Plan if the agency has not conducted monitoring in a decade? Please disclose the Forest Service's record of compliance with the additional monitoring requirements set forth in other projects in this ranger district or on the forest. Please disclose how you plan to correct this monitoring deficiency.

Monitoring is especially important because in the past four of five years, the Forest Service has sold more timber than the previous years dating back to 2000. Logging frequency has increased over the past five years, and there is no monitoring to inform on those impacts. FOC graphed the annual timber sold based on Forest Service reporting. ** see chart on page 15 of comment letter** Above chart based off of R1 annual timber sale numbers for the Nez-Clear (See also R1 Timber sold annual report folder, which contains the chart and the support for the numbers used in the chart.)

When one looks at the board feet sold in 2012, there is a large difference between that and 2018 (NOTE: 2019 was identical to 2018). Only monitoring can inform these impacts. Monitoring that the Forest Service continues to neglect in violation of the Forest Plan. ([10-36])

Response: Forest Plan monitoring is outside the scope of site specific projects.

Cumulative Effects

38. The cumulative impacts of this along with other activities including the roadside salvage on the 443 road, Johnson Bar, Red Moose, Iron Mountain, and fire fighting activities—need to be evaluated. ([10-12])

Response: Cumulative effects for each resource has been documented in the EA (pp. 14-68). Each resource area has defined the analysis area and timeframe for effects to occur.

39. Please disclose the current standing volume under contract in the nearby areas and any in the project area, if it exists. We understand standing volume under contract to mean what you have sold but have not yet cut. This will impact a cumulative-effects analysis ([10-25])

Response: Volume under contract is not analyzed for cumulative effects. Cumulative effects exist where effects of other activities occur both spatially and temporarily along with the effects of the Green Horse project.

40. The proposed action states on page 16 that additional opportunities for transitional grazing would

be available for 15 years. The project is a longer one—do you mean fifteen years from the start of the project or fifteen years from when the project is complete? Negative impacts from this use are not discussed or even contemplated. The NEPA document needs to adequately address grazing and the cumulative impacts it may have on other resources. How will this impact ungulates? Would you be creating grazing opportunities that you cannot adjust back down in 15 years because of the ranchers who come to rely on the additional grazing? How will you plan for this? ([10-35])

Response: Transitional grazing would be available approximately 15 years after units are harvested. Not all units may be harvested within the same operation year. Annual operating plans are created every year with the Forest Officer and the grazing permittee. The AOP gives the specifics for the ensuing season that include dates and areas of use, utilization standards, etc. Coordination with other resources, the Forest Plan, and applicable EAs is completed ensure that the objectives and actions of the grazing activity are compatible with current conditions. Grazing is a past, current, and reasonably foreseeable action that is included in the cumulative effects analysis.

41. The Tribe is concerned with the number of large openings that would be created in the Project area by regeneration treatments. Large openings have the potential to impact how terrestrial species move across the landscape. The large openings proposed under the Proposed Action could exacerbate resource conditions within the Project area, including impacts from motorized use of the road network, cattle grazing, previous soil disturbance, and establishment and spread of undesirable plant species ([3-6])

Response: The cumulative effects have been documented in the EA. Additionally, there is always the potential for the spread of undesirable plant species when land management activities take place. The Forest works to mitigate the likelihood of spread through equipment cleaning and inspection requirements, spot treatment along roadsides, and seeding along closed temporary roads, skid trails, and landings. Large openings created by harvest in this project are proposed to be reforested and would not remain large openings in perpetuity. Grazing would still occur within the annual operating plan.

Fire/Fuels

42. The proposed prescribed burning treatments include the torching of individual or groups of trees to create a mosaic of burned and unburned conditions. The Tribe recommends that the Forest do not burn trees with obvious nests or cavities, and especially not during the breeding season of migratory birds and mammals. ([3-5])

Response: The standard design features for this project include retaining trees with occupied cavities, or occupied raptor nests to comply with the Migratory Bird Treaty Act (MBTA) and Regional Guidance (document 11-004). Intent of ignitions during proposed landscape prescribed fire is to achieve a mix of low to medium intensity surface fire. As described in the proposed action, the prescribed fire landscape burning would occur after the timber harvest treatments are completed, so not all the proposed units would be burned during one burning operation. This would also allow for less disturbance at one time within the burn units. Prescribed burning would be conducted based on weather and site-specific conditions and would take place under the guidelines set forth in a prescribed fire burn plan developed specifically for this project area. Additionally, broadcast burning would be limited in units 18, 19, and 21 during migratory bird breeding periods.

43. Also, the Forest Service has provided absolutely no support that dead fuel—trees killed by the hemlock looper--contributes to the high-severity wildfires. The PA leads the reader to believe only dead and dying trees will be targeted and those are the ones that contribute to fire severity. There is considerable research about how beetle-killed trees, for example, do not contribute to high-severity

fires (Hart et al. 2015. Area burned in the western United States is unaffected by recent mountain pine beetle outbreaks, Proceedings of the National Academy of Sciences. Vol. 112 (14): 4375-4380. Harvey et al. 2014. Recent mountain pine beetle outbreaks, wildfire severity, and postfire tree regeneration in the US Northern Rockies. Proceedings of the National Academy of Sciences. Vol. 111: 15120-15125.). We would like to know the science you are relying upon, because this is an overly simplistic and false narrative; the best available science that we have reviewed supports no such assertion ([10-16])

Response: The need of the Green Horse Project is to reduce hazard trees, hazardous fuels, and wildfire risk: Intermediate harvest would remove dead and dying fuels caused by insects and disease that pose a hazard to roads. This will occur primarily along road system for public and firefighter safety that includes ingress/egress. Regeneration harvest units within would reduce fire intensities and wildfire risk. Landscape prescribed burning would maintain natural openings reducing wildfire intensities, and risk. All proposed treatments will treat hazardous fuel concerns, and aid in the developing a fuel break in strategic locations along Forest Roads for wildfire management in the future. Science supporting the project effects on fire and fuels management is documented in the EA (p. 20) and the supporting fuels analysis in the project record.

44. Science has debunked the view that older, unmanaged forests are at risk of higher severity wildfire and there is support for the opposite—more severe fires occur in areas the vegetation has been managed (Odion et al. 2004; Bradley et al. 2016. Does increased forest protection correspond to higher fire severity in frequent-fire forests of the western United States? Ecosphere 7(10); pp. 1-13, Article e01492; Zald and Dunn 2018. Severe fire weather and intensive forest management increase fire severity in a multi-ownership landscape. Ecological Applications 28(4): 1068-1080.). The way the Forest Service has framed the existing condition as needing logging and agencyignited fire is incorrect. For this reason, the purpose and need make no sense compared to the existing condition. The disturbance that will impair it is not fire—it is logging and mechanical work, with the roads. ([10-17])

Response: The overriding issue concerning fire and fuels revolves around fire hazard and fire risk. To support the need of the Green Horse project the issue of hazardous fuels and wildfire risk is a focal point within the fire and fuels report. Fire managers relate fire to intensities to the ability of resources to manage wildfire safely and effectively; refer to Table 3. Fireline intensity interpretations page 10 of the fuels analysis (document 19-001). Severity does not always correlate with intensities. Proposed treatments would reduce the potential wildfire intensity, and wildfire risk (EA pp. 19-21). Science supporting the project effects on fire and fuels management is documented in the EA (p. 20) and the supporting fuels analysis in the project record (document 19-001).

45. The proposed action is very misleading regarding the recent fires. It states, "Without further management to break up continuity and to create some age class diversity, there is an increased potential in both size and severity of wildfires. As witnessed during the summer of 2015 with the Wash Fire, which burned 36,853 acres around the Green Horse project area on the north and east flanks." PA at 14. The Forest Service's own BAER report (BAER report for Wash Fire.) for the Wash Fire shows 21,934 acres of the burn area as low severity (The numbers in the PA (36,853 burned acres), the reported number in the BAER report (36,555 acres), and the cumulative number of low, medium and high severity burns in the BAER Report (34,322 acres, leading one assume over 2,000 acres were not burned) are slightly different, though close.). The fact that 60% of the fire burned in low severity is inconsistent with what the proposed action alleges. A satellite image of the area also shows a mosaic. ([10-18])

Response: Wash fire was high intensity with low severity. Fires such as the Wash fire, that escape initial attack become large. Alteration of the fuels condition would reduce fire behavior by decreasing flame lengths to a *manageable level*, reducing high rates of spread to a lower range, and altering the fire type to a higher surface fire percentage over the project area (EA p. 20). The Need of the Green Horse proposal is to reduce hazardous fuels and wildfire risk, by reducing intensities over the project area through fuels treatments, hazardous fuels and wildfire risk would decrease.

46. In any case, high-severity wildfire does not eliminate all biomass, and in fact it creates biodiversity (Hanson 2010. The Myth of "Catastrophic Wildfire": A new ecological paradigm of forest health. John Muir Project Technical Report.). By skipping the "fire" part of the ecological process, which includes high severity fire, which is what the agency would do by implementing the treatments proposed, the agency is likely to impact species that rely on this ecological phenomenon, eliminate possible areas of refugia (see science on refugia referenced above), and will impact management-indicator species and sensitive species. For fire-related impacts to the species, please review the following:

Hutto 2008, The Ecological Importance of Severe Wildfires: Some Like it Hot. Ecological Applications 18(8): 1827-1834;

Noss et al. 2006. Managing fire-prone forests in the western United States. Front. Ecol. Environ. 4(9): 481-487.

If the Forest Service skips over this part of the ecological cycle by logging, future snags and habitat for species like the black-backed woodpecker will be eliminated. Because there have been so many "fuel reduction" projects that skip the fire part of the fire cycle, there is minimally a potential to be an impact. ([10-19])

Response: We agree that wildfire does create biodiversity. However, viewing fire as a natural and inevitable hazard and approaching risk management is complicated. In the proposed project area, accumulated fuels have heightened concerns over fire effects to resources, public and firefighter safety, fire behavior potential and the ability to effectively management of a wildfire event. To support the purpose and need of the Green Horse project the issue of hazardous fuels and wildfire risk treatments would reduce the potential fire behavior. Reducing flame lengths, rates of spread, and a modification to surface fire. Keeping a wildfire out of the tree crowns and on to the surface will aid fire managers (EA p. 20; and document 19-001). Landscape prescribed fire goals should mimic the characteristic fire regime as closely as possible. Allowing progress towards the restoration of ecological processes to help maintain current fire regimes, transition to historic fire regimes, and to enhance ecosystem resiliency.

Forest Vegetation

47. The Tribe has concerns that the Proposed Action's proposed silviculture prescriptions may not match with the potential vegetation type groups that are within the Project area. The landscape appears to be predominantly moist uplands and breaklands supporting grand fir, western redcedar, Pacific yew, Douglas-fir, and subalpine fir. What are the existing conditions within each stand that are driving selection of the proposed silvicultural treatments? What ecological problem in these areas is this Project intended to correct? What are the successional pathways, understory conditions, and other factors for developing the prescriptions? ([3-1])

Response: The existing condition is documented in the Green Horse Scoping package on pages 11-14 (document 04-014). Existing conditions do not currently meet desired conditions for potential vegetation type groups within the project (document 17-011). Selection of proposed silviculture treatments are designed to take the project area from existing conditions to desired conditions. Desired conditions include reducing the amount of late seral, shade-tolerant species that are prone to root disease and increasing the amount of early seral, shade-intolerant species that are more resistant to root disease. Site-

specific prescriptions will be finalized prior to implementation and will specify what species will be planted back where, depending on habitat types, slope and aspect.

48. The Tribe generally supports revitalization of early-seral, fire-resistant, and disease-/insect resistant tree species where ecologically appropriate, but how appropriate is it to change the species composition to ponderosa pine and Douglas fir—species more adapted to warm and dry landscapes—within the Project area? ([3-2])

Response: Species composition changes are based on habitat type, aspect and slope. Most of the project area is in the Warm Moist PVT, where species like western larch and ponderosa pine are underrepresented (Shantz, 2015). In areas where habitat type, aspect and slope are not favorable for ponderosa pine, other species like western larch, spruce, lodgepole or western redcedar may be planted. Douglas-fir would only be considered for planting if there were no signs of root disease or stem rots (document 17-011).

49. Have the proposed units and prescriptions been field-verified? And if not, when will field verification of the units occur? ([3-3])

Response: All treatment units will have site-specific prescriptions prior to implementation. Field verification may occur before, or during, layout and site-specific adjustments made based on stand conditions. Adjustments could include things like changing from a clearcut with reserves to a shelterwood, adjusting species composition and desired stocking to fit the site or adjusting site preparation for planting.

50. The Tribe is also concerned about site preparation treatments for reforestation, such as herbicide and rodenticide applications, and their impacts to wildlife and forage resources. Please provide specific details of what pesticides will be used, how often, and how the applications may impact wildlife and plants over the life of the Proposed Action. ([3-4])

Response: This project is not proposing herbicide treatments for reforestation. Rodenticide applications would be to control pocket gopher populations in order for successful reforestation to occur. Rodenticide (Strychnine Oats — Hand Baiting; EPA Reg. No.56228-20) would be applied at the lowest effective rates below ground into gopher burrows at selected sites. Application rates are typically $1/8^{th}$ to 1 lb of bait per acre, however it can be as much as 2 lbs per acre in heavily impacted stands. The proposed action has been updated to include these details. Details on rodenticide applications can be found in the forestwide Pocket Gopher Control DM signed on September 20, 2017 and includes documentation that no significant effects would occur to wildlife and plant species (document 11-003; also see EA pp. 21-22, 30 and 41).

51. The scoping letter suggests that forest species need to be shifted from stands dominated by grand fir, cedar and spruce to stands dominated by ponderosa pine, white pine and western larch. These recommendations appear to be unfounded given the probable habitat types found in the project area. As suggested in the scoping letter the area is dominated by a moist "inland maritime" climate and supports several species common in the western Cascades. Thus, the project area generally contains western red cedar habitat-types (Cooper et al. 1992.) on most low elevation northerly aspects. Drier habitats likely exist on low elevation south facing slopes, but these areas are still relatively moist when compared to other western forests and likely support grand fir habitat types (Cooper et al. 1992). Upper elevations likely support sub-alpine fir habitat types. According to Cooper et al. (1991), the major seral species in the cedar/queencup beadlily habitat type are Douglas fir, grand fir and western larch. Western red cedar is the climax species. In the grand fir/queencup beadlily habitat type they indicate that grand fir "in addition to being the climax dominant, is a major and most consistent dominate of seral stages, even following

clearcutting or severe wildfire." They also indicate that Douglas fir is the only consistently important seral species in the grand fir/queencup beadlily habitat type. Subalpine fir habitat types would be found in higher elevations and might be represented by the subalpine fir/twisted stalk habitat. Cooper et al. (1992) report the "dominance of spruce and sub-alpine fir at all successional stages" in this habitat type.

Thus, the presence of grand fir, spruce and western red cedar are the norm for most of the project area and not the "high risk" situation described by the Forest Service in the scoping document. Douglas fir is likely the most common species on low elevation Southerly aspects. Based on the information from Cooper et al. (1991) Forest Service ideas that the project area needs to be converted to more intolerant species such as white pine, ponderosa pine and western larch is just plain wrong. ([4-7])

Response: This project is not proposing shifts to western white pine in the Green Horse project. Species being proposed are closely tied to habitat types, aspect and slope and include spruce and western redcedar where appropriate, along with lodgepole, western larch and ponderosa pine. Much of the project area is at low-to-moderate risk of root disease, and signs of root disease were found in the project area, including conks of known root diseases, butt swelling and pockets of dead and dying trees (document 04-014 p. 14). Root disease can contribute to stand volume losses through mortality and reduced growth. It can also increase susceptibility to insects. By shifting species composition in the areas that are impacted by root disease, volume losses and susceptibility to insect-caused mortality are decreased while at the same time forested cover is being maintained over the long term.

52. Forests in the moist habitat types of the project area are generally competition-based systems that develop after large scale stand replacing fire. Stand density is usually not the driving factor in the initiation of these large-scale fires that generally occur at intervals of 250-300 years and under drought conditions such as those that occurred in 1910 and 1933 or in 2015 with the nearby Wash Creek fire. Green et al. (1992) report that the oldest trees, in the habitat group most appropriate for the project area (Type 4B), averaged 210 years with a range from 160 to 264 years. They report that "western red cedar may reach an age of 400-700 years".

In these habitat types intolerant species like western white pine and western larch have an initial advantage due to fast growth rates that allow them to capture the site and outpace the growth of other more tolerant species like grand fir, Douglas fir and western red cedar. Ponderosa pine, while present, is generally out competed in all but the driest locations in this system. In the 4A and 4B old growth descriptions, Green et al. (1992) report that "Ponderosa pine is a seral species on cedar and grand fir habitat types."

White pine and larch can remain on the site for long periods of time, these species are gradually replaced by more tolerant grand fir and western red cedar on more northerly aspects. On southerly aspects Douglas fir has an advantage due to its greater tolerance of drought and intermediate shade tolerance. White pine is not favored on southerly aspects due to moisture requirements, but western larch does well. The introduction of white pine blister rust changed this dynamic and gave a greater advantage to grand fir and cedar especially on northerly aspects.

I cannot understand Forest Service prejudice against grand fir and western red cedar, particularly since most of the project area is composed of cedar and grand fir habitat types. Why do you propose to convert stands with a high component grand fir and western red cedar to white pine, larch and ponderosa pine? Two of these species were likely limited of limited distribution in the project area (Ponderosa pine and larch) and the third species (white pine) is subject to an introduced pathogen that has decimated the species? The Green Horse project area is also likely on the edge of the historical range for white pine and it likely would not have been that common here. Such wholesale conversions are very risky and make no sense from an ecological perspective. There is a good reason why 85% your proposed units (Scoping Document -Table 4 - Page 11) are currently composed of grand fir, Douglas fir, spruce, sub-alpine fir and shade-tolerant cover types.

Grand fir and western red cedar find prime habitat in the project area and historically they always made up a significant component of the mixed species stands that are common here.

Contrary to your assertions in the scoping document, their presence does not indicate catastrophic risk for increasing levels of insect and disease attack. Such stands have survived thousands of years without human intervention and it can be expected that stands will naturally move to having higher components of western red cedar. In fact, western red cedar is one of the longest lived and most resilient species found on the Nez Perce/Clearwater National Forests. Western red cedar has few problems with insects and disease and historically old growth cedar stands where the hallmark of stable stands that lasted for hundreds of years on the Nez Perce-Clearwater.

In habitats like we see in the project area, most of the competing trees would have been present at the time of stand establishment and stands would have changed overtime due to competition, blowdown, and insect and disease attacks. These are factors that the scoping letter appears to consider major problems in the project area, when in fact they are part of normal stand development. Understory fire would have also had some influence, but it is not a major driver like it is in ponderosa pine habitat types.

Except for past harvest operations and the introduction of blister rust, this system pretty much operates as it did historically. Overtime, white pine may make a comeback as foresters develop and plant rust resistant stock and the tree develops resistant mechanisms on its own. I agree that the retention of disease-free white pine should be included in harvest prescriptions and planting of disease resistant stock practiced. However, a strategy that emphasizes white pine as the primary component of most stands (as you propose here) is highly questionable given the current status of white pine blister rust. White pine is subject to an introduced pathogen that has resulted in catastrophic losses across the species range and we don't know how that pathogen might respond to climate change. The project area is also on the historical edge of the range for white pine and likely did not support the densities of this species that were found to the north on the Clearwater NF.

Claims about stocking density in existing stands also appear to be overstated. The fact that these systems always had high densities of trees is well documented by Haig (1932) in his description of the white pine type years ago and long before the effects of fire suppression was considered a major issue. He reported that "The extremely rapid decrease in number of trees with increasing age is strikingly apparent. On good sites (site index 60) the total number of trees per acre drops from 4,700 at 20 years to 720 at 80 years, and to 390 at 120 years. The number of trees also decreases rapidly with increase in site index." On excellent sites (Site index 70) Haig found an average of 2,800 trees per acre over a diameter of 0.6 inches in diameter at 20 years of age, on fair sites (site index 50) Haig's tables show approximately 7,800 trees per acre over a diameter of 0.6 inches DBH at age 20 and on poor sites (Site Index 40) he found an 11,500 trees per acre at age 20. Clearly, the idea of understory encroachment is not an applicable in the moist cedar habitat types that predominate in the project area. Tree species found here like cedar, grand fir and white pine have made very little genetic investment in mechanisms to survive fire. Instead they rely on fast growth and/or extensive canopies that allow for light capture in densely stocked stands. ([4-8])

Response: The Forest has not identified any tree species as good or bad. The project addresses the existing condition within the proposed treatment area, which includes root disease, recent mortality from insects and high fuel loadings. Western white pine is not being proposed as a primary component of the stands in this project, as historic conditions do not indicate that western white pine was a major species in the Green Horse project area. This project is not proposing any stocking-related thinning, nor claiming overstocked stands. This project is proposing to shift species composition across the project area to species that are considered early seral in areas where habitat types support the shift in order to reduce the amount of root disease susceptible species on the landscape. Root disease has become a major loss of volume and is considered one of the most damaging group of forest diseases in the United States (Lockman & Kearns, 2016). Continuing to allow grand fir and Douglas-fir to dominate the canopy in

areas with low-to-moderate root disease will perpetuate the disease until areas with the highest amount of root disease will no longer support forested cover (Hagle 2004). While grand fir and Douglas-fir are important tree species to maintain on the landscape, reducing the acres where they are dominant will reduce the likelihood of creating non-forested openings that will no longer support trees due to the high amounts of root disease present.

53. The proposed action includes more than 1,500 acres of regeneration harvest. While regeneration harvest can be an important tool to alter forest composition and structure and achieve desired forest conditions on moist sites, regeneration harvest can also negatively affect wildlife habitat. Johnson and Franklin (2009) developed a set of recommendations to ameliorate these concerns. They advocate for the retention of pockets or "aggregates" within target treatment stands. In the treated areas between aggregates, Johnson and Franklin also recommend dispersed retention of individual leave trees, coarse woody debris, snags, and small clusters of trees. While the primary objective of their recommendations is to ensure that important structural components of wildlife habitat are retained following timber harvest, their recommendations may also satisfy visual quality objectives through the creation of more natural looking openings.

Based on pilot projects implemented on the west slope of the Cascades, Johnson and Franklin recommend that foresters retain approximately 30% of the original stand in aggregates, varying is

recommend that foresters retain approximately 30% of the original stand in aggregates, varying in size from 0.5 to 5 acres. Larger aggregates are encouraged where unit size and yarding methods permit. Aggregates should be centered on mature or old growth trees, concentrations of coarse woody debris, snags, seeps, rock outcroppings, or other unique structural features. To the extent practical, aggregates should include an overall representation of the tree species that were present in the original stand.

Retained aggregates should be well distributed throughout the treatment unit. The scoping notice indicates that retention objectives would first be met by untreated ground that is within riparian habitat conservation areas (page 4). Johnson and Franklin suggest that it is okay to count riparian habitat conservation areas (RHCAs) toward as much as 30% of the retention target when RHCAs extend into harvest units. However, credit for riparian buffers should be minimized because RHCAs are spatially concentrated and tend not to be well distributed in treatment areas. Ecological forestry objectives are not met when large areas are created that lack in retention.

In the treated areas between aggregates, additional retention should also occur as individual leave trees, coarse woody debris, snags, and small clusters of trees. Large or mature trees are ideal candidates. Retention of individual trees is intended to aid in the recruitment of snags, nesting habitat and coarse woody debris.

Following harvest, treated areas should be broadcast burned. Aggregates should remain unburned. The mortality of some individual leave trees or clusters of trees is acceptable as this will serve to create snags for species that are associated with or benefit from these structural features. Finally, the edges of treatment units should be irregularly thinned. Sharp unit edges result in a phenomenon known as the "edge effect", which is not only visually unappealing, but sharp edges are also not idea for wildlife.

It appears that the Forest Service intends to apply these concepts to the stands targeted for regeneration, which we appreciate. Several times in the scoping notice, the Forest Service refers to required retention levels (For example, see the second sentence under the section describing regeneration harvest.). However, we could not find any information in the document describing what the required retention levels actually are. It's unclear if the retention levels are based on suggestions found in the scientific literature or if the required retention levels are associated with the Forest Plan. In any case, the Forest Service should clearly state what the required retention levels are and where they come from.

The Forest Service states that long-lived early seral species will be given preference for retention where they are available (page 4). Other species may be retained "provided that the trees are relatively free of insect and disease." The Forest Service notes that "[g]enerally, trees with heavy

(67-90% of foliage missing) or severe (greater than 90% of foliage missing) defoliation do not recover." (page 13). Is it safe to assume that trees with 67% or more defoliation will be removed? The Forest Service should more clearly define what "relatively free of insect and disease" means in terms of what will be retained and what will be removed. ([6-1])

Response: The project is meeting Forest Plan standards and guides for visuals and would be implementing valid and appropriate silvicultural treatments. Across the units there are typically clumps of reserves, in addition there would be corridors of untreated RHCA and areas that are unable to be treated due harvest system limitations, further adding to post-treatment visual variability. Required retention levels are based on existing stand conditions and may be higher for some areas and lower for others depending upon species composition, amount of root disease present and other site-specific conditions. Retention will meet Forest Plan compliance, and will take into consideration wildlife needs, soil productivity, amount of insect and disease damage within the stand (and the ability to leave healthy trees behind vs trees that are dead and/or dying), visual concerns and other resource needs.

54. While the retention of entire stands of old growth trees is important for ecological reasons, so is the retention of individual mature trees within stands or portions of stands that are targeted for silvicultural treatments. The Forest Service understandably intends to focus on the retention of any long-lived early seral species that occur in treatment areas. However, retention of large, mature, shade tolerant species may also be desirable from a wildlife standpoint. Large, mature trees can provide habitat for nesting and aid in the recruitment of snags, course woody debris, and other beneficial structural components.

This This objective is typically accomplished by setting a limit on the diameter of trees that may be cut and harvested. However, age limits are also gaining traction in the scientific literature (e.g. Johnson and Franklin 2009). While no single diameter or age can define these biological legacies, diameter and age limits can help facilitate the conservation of the most desirable leave trees in forest stands that are slated for treatment.

In the forests of north Idaho, diameter and age limits are probably most appropriately derived from Green et al. (2011), who use a minimum age of 150 years in their definition of old growth trees (Lodgepole pine is a notable exception, with a minimum age of 120 years.). Some foresters reject age limits as a practical matter. However, Johnson and Franklin (2009) describe how to make age limits work (see pages 26 and 27).

If the application of an age limit continues to be problematic, then we suggest using species-specific diameter limits for live tree retention. We suggest using the following diameter limits, which come from the old growth criteria for the North Idaho Zone described by Green et al. (2011):

- Retain all ponderosa pine, Douglas-fir, grand fir, western hemlock, white pine, and western larch that are 21 inches dbh or greater.
- Retain all western red cedar that are 25 inches dbh or greater.
- Retain all lodgepole pine that are 13 inches dbh or greater.
- Retain all subalpine fir, Engelmann spruce and mountain hemlock that are 17 inches dbh or greater. ([6-2])

Response: The project is currently meeting Forest Plan standards for retaining old growth. The Nez Perce Forest Plan Appendix N outlines requirements for consideration of old growth. In addition to Forest Plan requirements, old growth was analyzed using Green et al. (2011). See the Green Horses Effects Analysis for a summary of old growth within the project area (EA pp. 73-74). This project is designed to leave large trees on the landscape, both for retention of large trees and future snag recruitment (document 11-004). Many large, mature shade-tolerant species within the project area are infected with stem and/or root rot that leaves them vulnerable to windthrow, especially following harvest. Selection of leave trees takes these factors into consideration. Wildlife retention needs are also part of the project design and take

into account the importance of future snag recruitments, habitat for nesting and course woody debris recruitment.

55. The current condition of the forest vegetation is described as relatively homogenous stands of nearly 80% grand fir and other shade tolerant species with little diversity of size, age, or structure. The extent of the insect damage, including outbreak conditions of hemlock looper, is evident and appears to be expanding outwards from the recently burned Wash Fire perimeter. Silvicultural treatments appear to primarily address disease susceptible species and currently dead and dying trees over at least a 12-year period. IFG would highly encourage the Forests to be as aggressive as possible in the near term to not only keep up with the expected mortality, but actually get ahead of it. Include treatment of stands that are not currently showing signs of stress but are clearly either in the trajectory of the spread or at high risk due to overstocking of shade tolerant, highly susceptible species. Our foresters noted opportunities to expand treatments in units 6, 7, and 8 as well as between units 1A and 2A and to the west of unit 21. There appeared to be additional opportunities for roadside units along the upper side of road 9716A out to unit 11. ([9-2])

Response: Opportunities to expand treatment units was considered during the planning process. Management area direction, riparian buffers, and stands being managed for old growth limited the options to expand the units listed in the comment.

56. We recommend a consideration of at least an intermediate harvest unit in the Horse Creek drainage between roads 443 and the full extent of road 9704. These treatments would allow for improved resilience as well as a more diverse forest structure for wildlife considering the large extent of the burned acres in the surrounding landscape. ([9-3])

Response: The Horse Creek drainage was considered for treatment and eliminated from further consideration because of management area direction in MA 21 and access limitations.

57. If economically feasible, minor salvage opportunities may also be possible near units 21, 19, and 13 in order to remove hazardous fuel buildup. ([9-4])

Response: Thank you for your comment. Salvage opportunities were looked at early on and determined to be unfeasible due to lack of viable logs, landslide prone areas and other resource concerns.

58. The purpose and need to log in light of the hemlock looper is belied by the agency's own statements. For example:

The western hemlock looper creates snags and down wood by severely defoliating and causing the death of all sizes of western hemlock and associated trees in western hemlock stands that are older than 80 years. It also interacts with other agents, such as bark beetles, to cause tree mortality of defoliated trees. By causing topkill in all sizes of trees, L. fiscellaria lugubrosa contributes to the formation of unique limb structures and facilitates the colonization of living tree boles by stem decay. During outbreaks, high numbers of larvae pupae, and moths provide abundant forage for many species of birds and invertebrates. Some of the mortality associated with western hemlock looper defoliation may contribute to the formation of canopy gaps, increasing structural diversity.

See https://apps.fs.usda.gov/r6_decaid/views/western_hemlock_looper.html. So, the Forest Service obviously does not want structural diversity or abundant forage for many species of birds and invertebrates. What it apparently does want is to turn the Selway drainage into a tree farm. Comment ([10-10])

Response: The need for the Green Horse proposal is described in the proposed action document (04-014) on page 4 and in the Green Horse EA (page 3). It states the need for reducing the extent of insect and disease, altering species composition and reducing hazardous fuels. While insects such as the hemlock looper can add to structural complexity of stands when populations are at endemic levels, the amount of mortality they can cause at epidemic levels can lead to tree density and canopy cover reductions below desired levels. By treating hazardous fuels and shifting species composition, the project is adding to overall heterogeneity across the landscape with patches of early seral species mixed in with patches of late seral species.

59. We would like more information on how many units within which you anticipate the need to "control" gophers. How widespread is this across the forest currently? When do you find gopher populations increase to silvicultural actions, and which actions do gophers respond to? And we need more information on the environmental impacts of using chemicals or other strategies to kill gophers to offer meaningful comments. ([10-41])

Response: Gopher treatments would take place in units where not treating the pocket gophers would result in reforestation failure. Gopher treatments are typically done in all timber sales across the forest where gophers are present in large enough numbers to damage seedlings. The Green Horse EA has been updated to include methods and chemicals used for gopher baiting under the proposed action section. The Forest-wide Pocket Gopher Control DM signed on September 20, 2017 is incorporated in the EA by reference and it documents that no significant effects would occur to wildlife and plant species (document 11-003; EA pp. 21-22, 30 and 40).

60. I have pictures of the area around Elk City from the air, taken summer 2019. I understand you cannot make a definitive, conclusive determination of the damage from aerial photos.....but they look pretty I have pictures of the area around Elk City from the air, taken summer 2019. I understand you cannot make a definitive, conclusive determination of the damage from aerial photos.....but they look pretty bad. Also have pictures taken today (7 March 2020) from the ground of lots of trees with dead tops and branches with all needles gone from the tips. All sizes of trees. If 20% of the affected trees die, that's survivable. If 50% die, that would be tragic, if 80% die, it could be catastrophic for those of us who live and work in the area......

My neighbor told me today he had 2 of the moths in his house today......their back!

I support your project 100%, it should of been started earlier and should be bigger, much bigger. ([2-1])

Response: Thank you for your comment.

61. The current conditions, according to the proposed action, are a result of the high-severity wildfires that swept through the region in the early 20th Century. This was before the Forest Service was logging or suppressing fires, so none of the current condition as the agency has described it can be anything except natural processes. Stand-replacing wildfires on the order of centuries is the fire regime of the Northern Rockies (Westerling et al. 2006. Warmer and Earlier Spring Increase Western U.S. Forest Wildfire Activity. Science 313: 940-43; Brunelle and Whitlock 2003. Postglacial fire, vegetation, and climate history in the Clearwater Range, Northern Idaho, USA. Quaternary Research 60: 307-318; Odion et al. 2014. Examining Historical and Current Mixed-Severity Fire Regimes in Ponderosa Pine and Mixed-Conifer Forests of Western North America. PLOS One 9(2): pp. 1-14, e878852.), so what the agency described, "at risk" is actually nature governing this area.

Yet, the proposed action at 14 implies that this natural process is somehow unnatural. We would like an explanation on this. Especially since the Forest Service cites Westerling et al. 2006 (Westerling et al. 2006. Warmer and Earlier Spring Increase Western U.S. Forest Wildfire Activity.

Science 313: 940-43.) in the forest-plan revision process, indicating that the agency has accepted this science in other environmental analyses. This scientific article states that high-severity wildfires are the ecosystem feature of the Northern Rockies, thus fire suppression would have had little impact on the fire regime. Also, Westerling et al. 2006 discusses the potential for more wildfire because of a warming climate. If that is indeed the case and we are to expect more wildfires, why can't the agency let them happen naturally? Wouldn't the agency be adding onto the cumulative effects by igniting fires? ([10-14])

Response: The current conditions are a result of effective fire suppression that has removed wildland fire's effects from the Green Horse project area landscape and ecological system as well as past management that includes timber harvest and prescribed fires (documents 04-014, 19-001). When considering future management of fuels and the impact on wildfires, especially under warmer and drier conditions, one must also consider the effects to the dominant forest cover type under a warmer, drier climate. Shifting species composition to include trees more suited to warmer and drier conditions can impact future fuel loadings and fire intensity. Managing the fuels within the project area to avoid stand-replacing fires is within management area direction within the project area and reduces risk to nearby communities and private property.

62. What we've never seen for this forest is any scientific support as to levels of insect activity and disease that have occurred over the past century. Wouldn't you need these kind of levels to support assertions that insect activity or diseases are at unhealthy levels? ([10-15])

Response: Information on past insect activity and disease can be found in past aerial detection surveys, previous Forest Health and Protection trip reports and reports and assessments on forest health both forest-wide and region-wide. References in the proposed action for scoping (document 04-014) include Kearns and Lockman (2016), and Byler and Hagle (2000). Additional information on root disease can also be found in a 20-year study done on the Clearwater National Forest (Hagle et al. 2016).

Old Growth

63. Are there stands within the Project area that meet old growth forest characteristics? ([3-2])

Response: There are stands within the project area that meet old growth forest characteristics. See the Green Horse EA for additional information on old growth (EA page 73-74). This project does not propose harvest treatments within stands being managed for old growth.

64. We appreciate the fact that no old growth will be harvested (as defined by Green et al. 2011). We also encourage the Forest Service to identify and conserve recruitment old growth given that the amount and distribution of old growth forest types are generally underrepresented on the Nez Perce-Clearwater National Forests compared to historical conditions. ([6-5])

Response: The Nez Perce Forest Plan requires 5% old growth and 5% recruitment old growth by watershed to meet Forest Plan old growth standards. See the Green Horse EA and the Green Horse project record for more information on old growth within the project area. See response to comment # 66 for more information on how old growth was analyzed for this project.

65. Are the acres of logging going to affect any old growth? The proposed action suggests the proposal won't log in "verified or replacement old growth stands" (proposed action at 12, see also proposed action at 5), but unit 17B appears to be in MA 20 according to the forest plan map. The issue is further muddied on page 14 with the statement the proposal "is not expected" to diminish old growth. The issue is whether any old growth would be logged or affected by the proposal, not just verified or replacement old growth.

Showing compliance with the forest plan would be to provide the public a list of the timber stands the agency considers old growth, and a topographic map that identifies the old growth overlaid with the logging units identified. Further, the agency must show how it intends to comply with Appendix N of the Forest Plan. Additionally, if there is more than five percent of old growth in this drainage, the Forest Service has to rank that old growth to ensure that the best old growth is not logged. ([10-29])

Response: There is no proposed treatment in MA 20; maps have been updated to show corrected unit boundaries. Compliance with Appendix N of the Forest Plan can be found in the Green Horse EA under forest plan compliance (EA p. 73). See response to comment # 66 for more information on how old growth was analyzed for this project.

66. Despite doubling timber production since 2010, the Forest Service is using Bush et al. 2010 Forest Inventory and Analysis for a starting point on old growth. Since 2010 and that analysis, however, some of this increased timber production has come from old growth forests on the Nez Perce National Forest, and the Forest Service has also found the 2010 figures to contain areas that don't meet forest-plan old growth standards. This renders the 2010 starting point stale data, as supported by the following projects that post-date Bush et al.:

Center Johnson: Approved logging in forest plan old growth (final EA p. 46).

Dutch Oven Vegetation Management Project: Also used the Bush et al. 2010 analysis to identify old growth, but upon field visits to only some of what Bush et al. 2010 identified, the Forest Service found on-the-ground that the area did not in fact have old-growth characteristics, and even that one unit had been harvested. (Final EA May 2017 pdf p.168).

Windy Shingle: Used the Bush et al. 2010 analysis as a starting point and approved logging in areas the Forest Service identified as old growth. (Windy Shingle wildlife report, pdf pp. 7, 119). Also approved logging in an MA20 management area without a forest-plan amendment.

Iron Mountain: Cited same 12.9% figure from 2010 (EA pdf p. 76), and likely approved logging in old growth (EA pdf p. 79 and DN-FONSI).

End of the World: Used the Bush et al. 2010 analysis and proposed logging in "mature or overmature trees." (Logging in "mature or overmature trees" may very well be old growth, as indicated by the wildlife report but not directly disclosed or discussed in the EA in a manner digestible by the public.) (See USDA Forest Service 2019, Nez Perce-Clearwater National Forest End of the World Environmental Assessment and draft Finding of No Significant Impact and accompanying Wildlife Report).

Hungry Ridge: Proposed action to log in MA20 with a forest plan amendment, with up to 699 acres of logging old growth (FEIS Ch. 3, p. 265-66).

We don't know if these are all the projects because the Forest Service has not reviewed its impact on old growth in the Nez Perce National Forest since 2010—it keeps using the Bush et al. 2010 number of 12.9% as a starting place (See the Hungry Ridge EIS, Chapter 3 p. 260, starting using the Bush et al. 2010 old-growth estimation of "approximately 13 percent."), even though field visits in at least one project (Dutch Oven Vegetation Management Project) demonstrated the inaccuracies with even this number. Bush et al. goes off of FIA data, and FIA data does not determine the size of any particular old-growth stand. Relying upon Bush et al. 2010 for the forest-wide old growth assessment is out of date and cannot reflect existing conditions. Additionally, the agency must be checking for old-growth on the ground, as the agency has found when visiting areas of assumed old growth does not always match your records (see above). Also, the Forest Service cannot add all MA20 acres to count for old growth. MA20 in the forest plan stated half of the acreage the agency thought was old growth, and the other half was supposed to be replacement old growth. The agency has recognized this in other projects, but we have seen a couple of projects now where the agency seems to be assuming all MA20 acres are old growth, which inflates the accounting and likely overestimates it.

These projects represent cumulative effects on old growth that the agency must address NEPA analysis, and why, in part, an EIS is probably necessary.

Did the Wash fire eliminate any old growth? Is the Forest Service meeting plan requirements for old growth on the Nez Perce National Forest. These are relevant questions that need to be answered. ([10-30])

Response: This project meets Nez Perce National Forest Plan guidance on old growth. It is beyond the scope of this project to determine if the forest is meeting old growth requirements across the entire forest. See the Green Horse EA (pp.73-74) for a more detailed old growth analysis showing how this project is compliant with Appendix N of the Forest Plan. As part of that analysis, the impact of the Wash fire was considered when selecting old growth replacement stands. It is recognized that some areas will not have the required old growth due to wildfire and/or insects and disease. In these Old Growth Analysis Areas (OGAAs) that do not have enough old growth, the only harvest being proposed is roadside harvest to deal with roadside hazards for public and firefighter safety, and additional acres of recruitment have been set aside in adjacent OGAA's where there are more mature trees. Replacement stands were selected based on the probability of obtaining old growth status given existing stand conditions, location, and presence of desired characteristics such as two or more canopy layers, total canopy closure of at least 70% and downed logs. Stands that appeared to have less than 70% canopy cover, or stands that were burned in the Wash fire were not counted toward either old growth or replacement old growth under current forest plant direction.

Wildlife

67. The Forest Service is fond of the argument that viability cannot be discussed at the project level, but they then use habitat numbers outside of the project area to defend excessive development within the individual project area. They rationalize that sufficient habitat is available in other areas to make up for losses within the project area. Under this scenario, no project ever creates a significant impact and species are lost by "10,000 cuts" as project after project is allowed to proceed. The Forest Service cannot have it both ways; either they need to have project designs that create minimal impacts to species of concern, or they need to have monitoring information that confirms their habitat proxies are "providing for a diversity of plant and animal communities based on the suitability and capability of the specific land area" as required by the National Forest Management Act. ([4-16])

Response: Some research on species provide an estimate of the animal's territory. This may be the preferred area an individual uses for all its needs; or it may be a territory for a limited period, such as a nesting or denning period. So the project area considered by the agency may or may not meet the size of an animal's territory. Viability is greater than one territory or one animal. It concerns the species. That is why this project area is not of sufficient size to discuss viability of the analyzed species.

68. Although regeneration of vegetation following timber harvest may promote forage production for wildlife, the creation of very large openings from harvest are a concern from a vulnerability standpoint, as extended sight lines may allow for extreme-range shooting of big game by hunters from elevated vantage points. ([3-7])

Response: Hunting is beyond the scope of the wildlife analysis. The state decides the annual harvest levels prior to the selling of hunting tags. During hunting season, all game species are at a higher vulnerability to hunting pressure; regardless of the legal weapon used. Open areas may offer an increased opportunity for a hunter to see or even take an animal, but it does not increase the amount of legal take that the stated regulates.

- 69. What is the reason behind implementing the mitigation measures WL 1, WL 2, and WL 3 in units 18, 19, and 21? ([3-10])
- 70. The Tribe recommends implementing WL 1 through WL 5 (and adding areas outside Management Area 21) in all units, where appropriate, and adding a mitigation measure to retain trees and snags with nests and cavities. ([3-11])
- 71. You offer no mitigation measures for the protection of goshawk nesting habitat and postfledgling areas should a nest be located during project implementation. The nest area should be protected by a 40-acre no cut buffer and any harvest in the post-fledgling area should maintain at least 60% of the post-fledgling area in mature forest. All cutting in the post-fledgling area should be restricted during the nesting season. ([4-5])
- 72. Where dead trees or snags exist, they should be retained for wildlife benefit. In this instance, age thresholds and diameter limits should not be applied. While several sources (Thomas 1979, Raphael and White 1984, Zarnowitz and Manuwal 1985, Morrison and Raphael 1993) provide recommendations for the amount of snags to retain in unburned forests, why not retain all snags unless they pose a safety risk? Dead trees tend to provide little or no economic value, but they are of great benefit to wildlife. ([6-3])
- 73. To maintain wildlife security along roads with roadside treatments, the Tribe asks that the Forest take advantage of natural topography and harvest methods (feathering, skips, etc.) when marking units. ([3-12])

Response: Units 18, 19, and 20 are located in a Forest Plan management area for big game winter range (lower elevation, south facing aspects). The mitigation measures would reduce disturbance or displacement of big game by project activities. The Standard Design Features (2020) have been applied for snag retention, retention of trees with occupied cavities and raptor nests, buffer zone and timing of activities near an occupied goshawk nests, and restrict ground-disturbing activities in post-fledgling areas from April 15 to August 15 in order to comply with Forest Plan Appendix N, Regional Guidance (Bollenbacher 2009a), Migratory Bird Treaty Act (MBTA), Regional Guidance, EO 13186, 2016 Forest Service/ Fish & Wildlife Service MOU. These design features will be implemented through silviculture prescriptions, sale layout, and contract provisions (document 11-004).

After review of road status and proposed units, the interdisciplinary team determined WL-4 would most appropriately be applied to units along open roads. But a screen left along roads within units would not allow access to the unit or access to the system road from the unit. It is anticipated that this may create a need for increased disturbance for access (more temp roads or skid trails to get around the screen). Open roads where units are proposed were assessed for this mitigation measure and the findings include that WL-4 will not be applied to the proposed action because the units (17A and 17B) consisted of open areas (that would be excluded from harvest unit layout but may still be considered for site preparation and planting), root rot, and dead trees. Where the proposed action describes "Retention requirements will be dependent upon other resource needs (wildlife, visual, soils, hydrology) ..." and "Retention could also be clumped across the unit where needed for wildlife or other resource objectives" (EA p. 6); this could include feathering, skips, gaps of retained trees near the Forest Roads 443/446 junction as long as the purpose and need of the project is met; and this includes assessment where potential areas to retain would not be planted with desirable species. Unit 21 was also assessed for applying this mitigation measure, but the proposed action has been updated to keep openings within this unit (as well as units 19 and 20) less than 40 acres. Tree retention to keep openings less than 40 acres will break up continuity within the unit and it is not anticipated that elk would be visible 200 feet from Forest Road 443. For these reasons, WL-4 will not be applied to the proposed action.

WL-5 does not apply to the Green Horse project because the project area does not have the features of moose winter habitat, including 30% understory of yew at 12 acres or more. The Forest would like to increase yew and the Green Horse project does not target yew. Site visits and modeling has not indicated

that yew is present. If yew is to be identified during layout; patches would be retained in clumps with other tree retention and the silviculture prescriptions would reflect this. This is reflected under the description of the proposed action where it states "Retention could also be clumped across the unit where needed for wildlife or other resource objectives. This retention pattern will provide visual irregularity across the landscape"; and "If Pacific yew is present in the understory, it should be considered for a retention clump or patch for wildlife" (EA p. 6).

The roadside treatments in roadless areas will focus on dead or dying trees only within 150 feet of the road; therefore, trees retained would be highly variable, depending on the amount of dead and/or dying trees and whether or not the site is already somewhat open (such as unit 17B along 365). Roadside unit treatments with the regeneration harvest treatment would create openings within 150 feet along the road. The proposed roadside treatments may make some elk in these areas more "exposed", and potential victims of a hunter on or near a road, but it would not increase the amount of legal take to a point that would be more than the allotted hunting tags, nor cause a crash in the population. The IDFG manages the tags for elk each year. They may adjust the quantity of tags (general rifle season, archery, black-powder) based on the monitoring of the elk herd by periodic reports. IDFG establishes the quota for take; which reflects the quantity of elk tags set for each season for legal take.

- 74. Other than reporting the number of acres treated in each species' habitat, the analysis should provide information on species' occurrence, population information, and direct, indirect, and cumulative impacts to species and their habitats. ([3-15])
- 75. The wildlife analysis presented in the scoping document is obviously incomplete and only displays acres of existing habitat and acreage losses in those habitats. It fails to answer the "so what" question of what habitat losses associated with the project mean. Most of the analysis is based on stand exam or Vmap database queries and there is a general lack of monitoring data to confirm any of the conclusions of the analysis. Spatial requirements of territorial species have not been considered and no thresholds of management activity have been set for most species. With the exception of summer habitat use by elk, the impact of motorized use has not been considered for any species. The examination of cumulative effects is also very weak for most species. For example, there is no real evaluation of the nearby Wash wildfire ([4-12])

Response: As required, the EA will document the direct, indirect, and cumulative effects of the proposed action (EA. pp. 27-47). The documents available for scoping described the existing condition of the project area (document 04-014 pp. 16-20) as well as supporting information in the project record (document 24-005).

- 76. The Idaho Fish and Wildlife Information System documents an occurrence of Canada lynx in the Project area in 2001, but the Proposed Action does not include this information. Please evaluate impacts to threatened, endangered, proposed, and candidate species. ([3-16])
- 77. According to the 2002 Nez Perce National Forest Lynx Analysis Unit (LAU) map, there are two LAUs in the project area—Fivemile and Lick. As such, the PA is in error regarding lynx habitat. Some of the cutting units in Horse Creek are within prime lynx habitat as is the unit at the head of Lick Creek. Thus, we question the accuracy of the PA. ([10-33])

Response: The Northern Rockies Lynx Management Direction, (FEIS, Vol. 1). 2007 shows the Nez Perce NF is considered as an unoccupied forest by lynx. In 2014, the Forest updated their lynx habitat model. The result was no lynx habitat was found in the former Lynx Analysis Unit (LAU) #16 so no lynx analysis is necessary and this LAU is no longer used.

78. The proposed vegetation management could improve forage for not only big-game, but also for livestock. The Tribe recommends that the Forest evaluate potential conflicts between wildlife and

- livestock for forage resources during and after Project implementation. ([3-17])
- 79. The scoping notice acknowledges that the proposed vegetation treatments could reduce the effectiveness of elk habitat. The environmental analysis should also disclose whether or not the amount of motor vehicle access within the project area meets Forest Plan requirements for the affected elk analysis units ([6-10])

Response: Four Elk Analysis Areas (EAA) intersect or are within the Green Horse project area. Each EAA is evaluated by the use of a spreadsheet (documents 24-001-24-004) that tracks the changes in openings, roads, security, livestock presence, and hiding cover over timeframe of the project (existing condition, during implementation, and post project activities). Livestock presence is evaluated for potential impacts on elk habitat.

80. The mitigation measure for the protection of additional moose winter habitat is unclear. It sounds like portions of some stands may be excluded from timber harvest if they are identified as potential moose wintering areas. Three criteria are suggested in the mitigation measure to identify potential habitat: (1) an understory 30% yew, (2) a grand fir overstory of trees greater than 15-inches and 50% crown closure, and (3) slopes less than 35%. I support this measure, but believe more upfront investigation of harvest units is required to actually document the extent of this condition in the various harvest units. I would also not limit protection to slopes less than 35% if the other conditions are met. ([4-6])

Response: The mitigation measure for the protection of Pacific yew within moose winter habitat does not apply to this project. Grand fir habitat with potential shrub understory was used for moose habitat; pacific yew is not present with in the project area. The proposed action has been modified to state that if Pacific yew is present in the understory, it should be considered for a retention clump or patch for wildlife (EA p. 6).

81. My overall impression is that the Green Horse Project will have negative consequences to most wildlife species. The proposal includes four large regeneration harvest units that are over 100-acres in size and one of these units is incredibly 406-acres. The center of these large harvest units is likely to be avoided by most big game species and other species like the fisher and marten will avoid them entirely. Harvest treatments will remove snags, downed wood, shrubs, understory plants and important hiding cover. ([4-9])

Response: The proposed action and supporting existing condition information that was made available during the combined scoping and 30-day comment period provides a table (pp.16-17) that displays the species that may be affected by the Green Horse project; based on their habitat that may be modified by the proposed treatments (document 04-014). A brief explanation for each species and habitat is presented (pp. 17-20); which includes the existing habitat conditions and preliminarily how much potential habitat may be affected by the proposed treatments in the project area. The propose action and Forest Vegetation sections of the EA (pp. 6, 11 & 15) point out that that trees and downed woody material (EA, Table 2) would be maintained in all harvest units. Design features would retain old growth and large trees as well as snag habitat per legal requirements. The wildlife analysis in the EA provides further details on effects (pp. 26-47).

82. The Green Horse project will recondition 20-miles of existing road and reconstruct 19-miles of existing road. Two miles of new temporary road is also planned. The current condition of these roads is not reported, but it can be expected that this work will increase human access to the project area and that will have negative impacts for most wildlife species. ([4-10])

Response: Road access would be increased for the proposed vegetation management activities. However, not all activities would occur at once, and not all roads would be used at the same time. Activities would be concentrated in smaller sections of the project area. Upon completion of the project, temporary roads and trails would be obliterated, and many of the roads would return to the direction of the Forest's travel management status. That would return the project area to providing about 10 miles of road for the public access and 1.8 miles of this is only for high clearance vehicle. Motorized vehicle activity may disturb or displace wildlife that are on or near the road under use. During periods of no traffic, wildlife may return in close proximity to, or cross the road prism.

83. Schultz (2010) outlined most of these problems in a critique of Forest Service wildlife analysis. Schultz found that the Forest Service often relies on stand exam queries to determine acres of suitable habitat, but then makes no interpretation as to what that loss of habitat means to the species. Similar to what has been done on the Green Horse project; there is a failure to set meaningful thresholds and assume that habitat losses are insignificant. Schultz (2010) concludes that "the lack of management thresholds allows small portions of habitat to be eliminated incrementally without any signal when the loss of habitat might constitute a significant cumulative impact." ([4-13])

Response: Schultz mentions in her article that the *Ninth Circuit Federal Court deemed it appropriate for the agency to use measurements* of habitat availability as a proxy for direct measurements of population status. The Wildlife section of the Proposed Action that was made available for the scoping/30-day comment period (Table 7) shows the species with potential habitat in the project area (document 04-014 p. 16-17). The EA documents effects of the proposed action (pp. 26-47) and includes how much habitat may be affected by the proposed action for each of the species.

- 84. The analysis assumes the project will not contribute to cumulative habitat losses at the Forest level, when the Nez Perce/Clearwater has no idea what the cumulative impact of numerous past and proposed projects are having on the species of concern. Right now the Forest Service is trying to significantly increase the amount of logging across the Nez Perce/Clearwater National Forest and numerous projects are in the works (Center Johnson, Clear Creek, Crane Point, East Saddle, End of the World, French Larch, Gold Hill, Hungry Ridge, Johnson Bar, Little Boulder, Lolo Creek, Lowell WUI, Lower Orogrande, Northside Powell, Orogrande Community, Parachute Fuel, Pete King, Red Moose Divide, Smith Ridge, Stray Creek, Tinker Bugs, White Pine, Windy Shingle, etc.). Little regard has been given to the impact of all of this activity on fish, wildlife and water quality. Like Green Horse, none of these proposals ever causes any negative impact to fish and wildlife. ([4-14])
- 85. It is over 30 years since the current Forest Plan was signed, yet there is currently no statistically reliable monitoring information on the impacts of Forest Service activities on any wildlife species of concern. With the possible exception of elk (populations monitored by the Idaho Fish and Game) and the North Idaho Elk Guidelines, there is no habitat proxy that is being used on the Forest that has any field verification. For example, it has not been confirmed that old growth standards are truly protecting old growth-related species like the fisher, goshawk, pine marten and pileated woodpecker ([4-15])

Response: Cumulative effects for wildlife have been documented for all of the above projects and are located within each of their project records. The project record contains monitoring report (25-079). The report shows that the four species mentioned in the above comment are at a stable status. Additionally, documentation in the project record states the population trend for each species analyzed, at the state and global rank.

86. Most studies have found that fishers are reluctant to stray from forest cover and that they prefer

more mesic forests (Buskirk and Powell 1994, Olson et al. 2014, Schwartz et al. 2013, Sauder 2014, Sauder and Rachlow 2014, Weir and Corbould 2010). Both Sauder and Rachlow (2014) and Weir and Corbould (2010) predicted the influence of openings on fisher habitat occupancy based on their data. For example, Weir and Corbould (2010) predicted that a 5% increase in forest openings would decrease the likelihood of fisher occupancy by 50%. Sauder and Rachlow (2014) suggested that an "increase of open area from 5% to 10% reduces the probability of occupation by fishers by 39%. Sauder and Rachlow (2014) reported that the median amount of open area within fisher home ranges was 5.4%. This was consistent with "results from California where fisher home ranges, on average, contained < 5.0% open areas" (Raley et al. 2012).

Sauder and Rachlow (2014) found that radio tracked fishers had an average of 50% mature forest (greater than 82 feet tall) and less than 5% open areas in their home range. According to their work of the arrangement of habitat is very important and they suggest that fishers select home ranges that have forests "arranged in connected, complex shapes with few isolated patches, and open areas comprising <5%..." Concentrated areas of timber harvest like those proposed on this project could significantly influence an individual fisher home range.

Sauder and Rachlow (2014) report the average home range size is approximately 12,200 acres and for a female fisher and approximately 24,300 acres for a male fisher. Home ranges generally do not overlap greatly for the individual sexes (21.3% for females and 15.3% for males), but male home ranges can overlap female home ranges. The wildlife analysis suggests that are potentially three home ranges that might be impacted by the proposal and the recent Wash Creek wildfire, but no maps have been included that identify these evaluation areas. The Green Horse project area is only 9,500-acres, so it is apparent that such home ranges would have to extend well beyond the project area.

The amount of existing opening is not reported in the project area, but the scoping letter suggests there have been 545-acres of regeneration harvest and 1,124-acres of burning in the project area since 1990. Most of the burning (94%) is associated with the recent Wash Creek wildfire. Therefore, about 17.6% of the project area may actually already be open habitat that would be avoided by the fisher. The project will treat 1,513-acres (15.9%) of the project area with regeneration harvest and treat 570-acres (6.0%) with prescribed burning.

Even if some of the existing stands are no longer considered an opening, it is not unreasonable to assume there will at least 30% of the project area in an open condition. Sauder and Rachlow (2014) found that home ranges with this much open habitat are generally unsuitable for use by the fisher.

Please update the fisher analysis in your environmental assessment and include a map of areas that you have examined for that analysis. Please display the amount of open habitat and older forest in each analysis area, and discuss why we should not be concerned about the loss of fisher habitat across the Nez Perce -Clearwater NF. Numerous other projects such as Center Johnson, Clear Creek, Crane Point, East Saddle, End of the World, French Larch, Gold Hill, Hungry Ridge, Johnson Bar, Little Boulder, Lolo Creek, Lowell WUI, Lower Orogrande, Northside Powell, Orogrande Community, Parachute Fuel, Pete King, Red Moose Divide, Smith Ridge, Stray Creek, Tinker Bugs, White Pine, Windy Shingle, etc. have also increased the amount of open area below the 5% level reported by Sauder and Rachlow (2014) as the optimum level for this species. This is particularly concerning given the fact that most of these sales are occurring in the historically heavily logged "front country" that supports the most productive fisher habitat and the most productive forest stands on the Nez Perce Clearwater National Forest. ([4-19])

Response: Science supporting fisher habitat is located in the project record (document 24-005). Fisher habitat for the analysis was based on Sauder 2014. The subwatershed scale (Hydrologic Unit Code (HUC) at a size 12 that is 10,000-40,000 acres) capture a fisher territory for the analysis area. In some cases the subwatershed may be too small, and is merged with an adjacent one. All activities (past, present, reasonably foreseeable or ongoing) in each subwatershed are evaluated along with the proposed actions of

the project. The project area intersects three subwatersheds that provide fisher habitat. O'Hara and Glover/Selway provide enough habitat for a potential fisher territory. Horse Creek is small and lacks the quantity of habitat for a fisher territory. Therefore, it was merged with the adjacent Glover/Selway subwatershed) to achieve adequate habitat for a second fisher territory. The Green Horse project area was used for the analysis area where approximately five home ranges could occur. Wildfires that occurred between 1994-2017 affected over 1,100 acres of potential fisher habitat. The O'Hara subwatershed is slightly under 50% mature habitat and is above the 5% fragmentation level in the existing condition. Wildfires from 2015 affected fisher habitat, as well as timber harvest from the Red Moose project.

87. The project will result in a significant decrease in snags and forest cover on 1,513-acres of regeneration harvest and 180-acres of intermediate treatment. What data supports the conclusion that these actions will not cause detrimental impact to bats and other species dependent on snags in light of all of the other timber sale activity that is being proposed across the Nez Perce/Clearwater NF. ([4-20])

Response: Snags would be retained in compliance with the design feature selected under the Old Growth and Snags section to comply with Forest Plan Appendix N, Regional Guidance (Bollenbacher 2009a), Migratory Bird Treaty Act (MBTA), Regional Guidance, EO 13186, 2016 Forest Service/ Fish & Wildlife Service MOU (document 11-004). Riparian and other forested areas that are not proposed for this project's activities would retain snag habitat.

- 88. The scoping letter suggests that the project area would improve habitat for big game because it would increase forage. According to the scoping letter this is supposed to improve wolf habitat. This is very debatable given the probable increase in forage that has been already created by the Wash Creek wildfire, the increases in human access that will result from the proposal and the large harvest units associated with the proposal. Areas greater than 500-feet from forest cover have been shown to be avoided by elk and most other big game species (Servheen et al. 1997). Cover and security habitat are likely much more important in this situation and this should be evaluated by completion of the Interagency Guidelines for Evaluating and Managing Elk Habitats and Populations in Central Idaho". (Servheen et al. 1997). ([4-21])
- 89. The scoping document reports that there are four elk habitat analysis units in the project area, but does not report the current elk habitat potential as required in the Forest Plan. The scoping document suggests that the "Interagency Guidelines for Evaluating and Managing Elk Habitats and Populations in Central Idaho" (Servheen et al. 1997) will be used to evaluate elk habitat in the upcoming EA, but no data is provided in the scoping letter. Please complete the analysis in the Environmental Analysis and include maps of each analysis area along with appropriate background information that displays the actual model calculations. ([4-31])

Response: Creating more habitat for elk or other big game provides more opportunities for the wolf to obtain prey. The discussion of openings in Servheen et al. 1997 states: "Areas more than 500 feet from cover receive approximately 25% of normal elk use unless there are no open roads in or adjacent to the opening." (Top of Page 20) So large openings may not be preferred by elk, but their use of the area is likely to occur, especially if there are no open roads adjacent to the opening. Nearly 500 acres of proposed regeneration units would be accessed by roads that are closed to the public. The elk analysis will be documented in the EA (pp. 42-45) with supporting information located in the project record (documents 24-001 – 24-004). The analysis covers the time frames of the existing condition, during project implementation and post condition (when all work is done). This analysis period shows that closed roads utilized during the implementation period will be returned to their closed status when work is done.

90. The scoping suggests there are 2,496 acres of existing (goshawk) nesting habitat in the project and that 480 acres of this nesting habitat will be impacted by the proposed project. Given the fact that

85% of the 9,500-acre project area is composed of stands that have an average DBH greater than 15 inches and that there will be 1,513 acres of regeneration harvest in mature forest stands, this doesn't make any sense. ([4-22])

Response: The analysis for nesting habitat is a tree size is 15 inches or greater, though a nest is more likely to be in a larger tree size (20 inches dbh or more). This has been corrected to show over 7,000 acres of potential nest habitat, and is in the wildlife section of the EA (p. 40).

91. Recommendations for the management of goshawk habitat (Reynolds et al. 1992) are available and should have been used in the analysis. These guidelines suggest that at least 180 acres of suitable nesting habitat be maintained in each goshawk home range. Nesting habitat is to be maintained in uncut blocks of at least 30 acres in size and these can be scattered around the home range. Regional direction based on Clough (2000) suggests the amount of nesting habitat should be increased to at least 240-acres and uncut nesting areas be increased to 40-acres. Postfledgling areas (420 acres in size) are to be maintained around each nesting stand and these postfledging areas are supposed to contain at least 60% older uncut forest.

Please complete an appropriate goshawk analysis based on the recommendations of Reynolds et al. 1992 and other researchers such as Moser and Garton (2009). This analysis should be based on theoretical home ranges of at least 5,000-acres and incorporate impacts to nesting habitat and post-fledgling areas. Maps of analysis areas, suitable nesting habitat and post-fledgling areas should be included in your report ([4-23])

Response: The preference for use of the Reynolds et al. 1992 was reviewed but was not used because it focused on goshawks in the southwestern region of the Forest Service and is over 25 years old. More recent and relevant research by Moser 2007, and Moser and Garton 2009 was employed in the analysis; as the studies occurred on the NP-CNF. Moser and Garton 2009 describe a male's breeding-season home range was an average of around 5,100 acres. Forest Regional direction for goshawk home range analysis is at least 5,000 acres. Brewer et al. 2009. After the breeding season, both genders selected home ranges of a size larger than the breeding season home range. Territories would vary in size due to habitat changes (wildfires, timber harvest, etc.) as well as the availability prey. Nesting territories include the post-fledgling area for this analysis; and follow Regional direction of 420 acres.

92. The scoping letter predicts that 144-acres of pileated nesting habitat will be impacted by fuel treatments and 384 acres will be impacted by timber harvest. These numbers seem low given the fact that 85% of the 9,500-acre project area is composed of stands that have an average DBH greater than 15-inches and that there will be 1,513-acres of regeneration harvest in mature forest stands and 180-acres of intermediate treatment. Some stands with an average DBH between 15-19.9 inches likely include individual snags/trees exceeding the 20-inch diameter size category usually reported as the minimum size for nesting by this species (Bull and Holthausen 1993, McClelland and McClelland 1999) and timber harvest likely will target stands in these larger size classes. ([4-24])

Response: The pileated woodpecker's nesting habitat was calculated at a tree size equal to or greater than 20 inches dbh, and canopy cover equal to or greater than 60% and this does not include the 15-19.9 inch (document 24-005). Additionally, the recalculation for nesting habitat shows 419 acres of such potential habitat; which is much less than the initial findings in Table #7 of the proposed action that was provided for the scoping-30-day comment period (document 04-014). The Green Horse project activities would reduce about 67 acres of nesting habitat, which will be documented in the wildlife analysis section of the EA (pp. 26-47).

93. Pileated woodpeckers are reported to have home range sizes of approximately 1005 acres (Bull et

al. 1992). Thus the 9,500-acre project area could potentially support 8-9 nesting pairs of pileated woodpeckers. The proposed project will treat harvest 2,263-acres, which is the size of at least two pileated woodpecker home ranges. Regeneration harvest which will occur on 1513- acres will remain unsuitable for foraging or nesting by pileated woodpeckers for 100-150 years as the new trees mature into size classes suitable for nesting and/or foraging.

Guidelines are available for the management of pileated woodpecker habitat (Bull and Holthausen 1993). These guidelines recommend that approximately 25% of the home range be old growth and 50% be mature forest. They suggest that 50% of the area should have stands with greater than 60% canopy closure and at least 40% should remain unlogged (any type of logging).

Follow up work (Bull et al. 2007) found that pileated woodpecker density did not change in 30 years (despite major infestations of spruce budworm) in home ranges meeting these guidelines, unless extensive regeneration harvesting (like that proposed on the Green Horse project) had occurred in the home range. They defined extensive regeneration harvest as 25% of the area. They also examined nesting success and found that birds that successfully produced young had on average 85% of their home range unlogged and less than 15% logged (any type of logging including fuel reductions). Whereas unsuccessful nesters had 62% of the home range unlogged and 38% logged (Bull et al. 2007). Schultz (2010) outlined most of these problems in a critique of Forest Service wildlife analysis. Schultz found that the Forest Service often relies on stand exam queries to determine acres of suitable habitat, but then makes no interpretation as to what that loss of habitat means to the species. Similar to what has been done on the Green Horse project; there is a failure to set meaningful thresholds and assume that habitat losses are insignificant. Schultz (2010) concludes that "the lack of management thresholds allows small portions of habitat to be eliminated incrementally without any signal when the loss of habitat might constitute a significant cumulative impact."

Using the guidelines, it appears that several existing pileated woodpecker home ranges would likely become unsuitable for successful nesting by pileated woodpeckers as a result of the proposal and that pileated woodpeckers would have to move to adjacent areas to find suitable habitat. A spatially explicit analysis is needed to estimate the actual number of pileated woodpecker home ranges that would be lost if the proposal moves forward. This information should then be evaluated in terms of the project area and the myriad of other projects that are occurring across the Forest. At some point, the impact to the pileated woodpecker and other species that depend on old forest is going to become significant. Please update your pileated woodpecker analysis based on the best scientific information. Your analysis should include maps of potential home ranges, maps of suitable habitat and the impact of your proposal on pileated woodpecker habitat. ([4-25])

Response: Harvest activities (regeneration & intermediate harvest would affect about 67 acres of the potential nesting habitat (418 acres) for the pileated woodpecker. Project design features would retain some snags and large trees. Landscape burning would occur in about 3 acres of nesting habitat but would not reduce large trees. Foraging habitat (7,308 acres) occurs across the majority of the project area. The description of a low to medium intensity prescribed landscape fire, conducted during favorable weather conditions does not reflect a high intensity wildfire so the majority of the large trees in these units would be retained. Additionally, the EA will document potential woodpecker territories in the wildlife effects analysis. Since territories cannot be delineated with absolute certainty but area based on Bull et al. 2007, no maps would be generated. The Schultz document was addressed in comment #83.

94. The scoping letter suggests there are 5,050 acres pine marten habitat in the project area and that 1,200 acres of this habitat is expected to be harvested with the Green Horse project. The analysis is not spatially explicit and fails to recognize more recent literature on the effect that habitat fragmentation on the pine marten. For example, numerous recent studies have found that the species is particularly vulnerable to habitat fragmentation (Webb and Boyce 2009, Hargis et al. 1999, Moriarty et al. 2011, Potvin et al. 2000, Wasserman et al. 2012). For example, Hargis et al.

(1999) reported that "Martens were nearly absent from landscapes having >25% non-forest cover, even though forest connectivity was still present." Avoidance of openings is well documented in the literature (Potvin et al. 2000, Koehler and Hornocker 1977, Chapin et al. 1998 and Wasserman et al. 2012). Given the Wash Creek wildfire and the fact that the project proposal will harvest 24% of the identified habitat it is very likely that the project has the potential displace marten from large portions of the project area. ([4-26])

Response: The updated Forest model shows about 7,533 acres of potential marten habitat in the Green Horse project area. The model's canopy cover attribute was greater than or equal to 40% (Wasserman et al., 2012). About 315 acres of the proposed landscape burning would be managed for low to moderate burn severities. The treatment would reduce fine fuels, and small-stemmed shrubs and trees. The burns would leave unburnt patches of small fuels, as well as most of the trees. Marten tree habitat would persist, though it may be more open, and patches of cover on the forest floor would be reduced. Most of the marten habitat would be retained in these areas proposed for such treatment.

About 1,442 acres are proposed for timber harvest would occur where marten habitat would be reduced. Some snags and large trees would be retained that may provide foraging or nesting habitat. Mitigation measures for soils would retain coarse woody debris on the ground- which would provide habitat for invertebrates and small mammals that the marten preys on. Riparian areas would not be impacted and would retain important corridors for movement, denning, resting and foraging habitat. The wildlife analysis in the EA documents effects to fragmentation (p. 39).

95. The Nez Perce/Clearwater National Forest needs to do a better job of identifying fragmentation impacts on the pine marten on the Green Horse project. I suggest that suitable habitat for the pine marten needs to be mapped at the project level. The findings of Wasserman et al. 2012 should prove useful in defining this habitat. Like many other studies they found that marten presence was positively influenced by the amount of mature closed canopy forest and negatively influenced by high road densities, non-stocked clear-cuts and habitat fragmentation. They also found that marten make use heavy use of western red cedar stands. Use of spruce/fir forests was less than reported in some other studies such as Koehler and Hornocker (1997). ([4-27])

Response: Fragmentation of marten habitat would occur in timber harvest units. However, some trees, snags and downed woody material would be retained in the harvested areas. Those acres treated by timber harvest would be re-stocked. Over time the tree canopy cover would increase. For some tree species, the canopy cover would reach 30% in about 20 years. Potential home ranges for marten will be documented in the wildlife effects analysis (EA. p. 38-39).

96. Theoretical home ranges should be delineated within the suitable habitat and that fragmentation effects examined. Home range estimates are highly variable for marten (Burskirk and McDonald 1989, Powell 1994) and no good estimates are available for Idaho in the literature. I suggest using the findings of Bull and Heater (2001) who found that female home ranges averaged 3,500 acres in nearby Northeastern Oregon. They report that home ranges do not overlap significantly in the same sex, but larger male home ranges (6,700 acres) often overlap female home ranges. The number of theoretical home ranges that the project area can support will be dependent on the amount of suitable habitat. Low elevation areas below 3,800 feet elevation are the locations most likely not to provide suitable habitat for the pine marten, but most of the remainder of the project area would likely support the pine marten.

Timber harvest should be then limited to actions that do not create extensive open areas in these home ranges. For example, Wasserman et al. (2012) report the probability of marten detection drops from 0.5 to 0.4 when the landscape is composed of 15% non-stocked clear-cuts. Hargis et al. (1999) report little use of home ranges (landscapes) that have greater than 25% open habitat. Such

an analysis would give a much more scientifically based projection of the impact of the proposed project on marten habitat and more appropriately deal with fragmentation and habitat arrangement impacts that have been ignored in the current analysis. Wasserman et al. (2012) point out four main management implications of their work that have implications for marten habitat in the project area. First, is "that marten select habitat at multiple spatial scales, selecting home ranges within unfragmented landscapes with high canopy closure and low road density..." Second is "the importance of low fragmentation, middle elevation forests" and third is that timber harvest in northern Idaho National Forest System lands was disproportionately concentrated in high-productivity and highly valuable middle-elevation mesic forest types". These stands are the exact target of actions on the Green Horse project. Fourth, "is that marten are highly sensitive to road density and patch density" and that "abandoned and decommissioned roads that do not appear on current travel plan maps still have substantial impact on marten habitat ([4-28])

Response: Science supporting marten habitat is located in the project record (document 24-005). Home range estimates were based on Shirk et al. 2012. The Green Horse project area was used for the analysis area where approximately five home ranges could occur.

97. The Green Horse project will build 2.0. miles of new temporary road, recondition 20-miles of existing road and reconstruct 19-miles of existing road. The existing condition of these roads is unreported in the scoping letter and it is unknown if all or the existing roads are currently open to motorized access. Reconstructing closed roads and allowing more human access could be detrimental to the pine marten. ([4-29])

Response: Proposed road activities are on page of the EA under the Proposed Action section (pp. 8-9). Roads proposed for this work are currently not in a condition to support log haul safely. Roads may need to be brushed (vegetation removed from the sides of the road), cutslope failure may need rehabilitated along with removal of large rocks and trees, gravel will likely be placed on the roadway; cross drains, drainage dips, and ditch cleaning could occur to improve drainage. Roads that are closed to the public would remain so during project activities. Upon conclusion of project activities, all system roads would return to the management status they held prior to project implementation. All temporary roads would be fully recontoured after use. These road activities may create disturbance that may displace individual marten in the short term (5-year period of when operations are occurring) (EA p 39).

98. When coupled with activities being pursued on the Forest (Center Johnson, Clear Creek, Crane Point, East Saddle, End of the World, French Larch, Gold Hill, Hungry Ridge, Johnson Bar, Little Boulder, Lolo Creek, Lowell WUI, Lower Orogrande, Northside Powell, Orogrande Community, Parachute Fuel, Pete King, Red Moose Divide, Smith Ridge, Stray Creek, Tinker Bugs, White Pine, Windy Shingle, etc.), the risk to the species is much greater than suggested in the wildlife analysis. Please do a more complete investigation of pine marten habitat in the Environmental Analysis and include maps of suitable habitat and theoretical home ranges used in the analysis ([4-30])

Response: Analysis for marten has occurred and is available in the respective wildlife section for each of the projects mentioned above. The analysis methodology includes GIS layers. Cumulative effects for analyzed species are documented in the EA (pp. 38-39). See comment 95 above for the analysis area

99. The scoping document reports that there is no proposed harvest in management area 21 (Moose winter habitat). MA-21 is generally considered to occur in old-growth grand fir stands with a dense understory of pacific yew (Pierce and Peek 1984). The importance of these habitats has been documented in the Nez Perce Forest Plan with a special management area (MA-21) and local habitat management guidelines were developed for that habitat based on that local research (Peek et al. 1987).

These guidelines suggest that no more than 45% of MA 21 should be in age classes younger than 90 years and that no more than 14% should be logged in any 30-year period. Management area direction for MA-21 has a standard that only lands under 35% slope are suitable for timber harvest and that only 5% of the suitable acreage can be harvested each decade. Suitable lands (those under 35% slope) are to be managed on a 210-year rotation. Harvested stands are to be managed to maintain 50% of the live Pacific yew component. Slopes exceeding 35% are not supposed to be harvested in MA-21.

The scoping letter suggests that more moose winter habitat with a grand fir overstory of older trees and a yew understory may be present in the project area based on the fact that there are 6,650-acres of grand fir dominated forest over 15-inches DBH in the project area outside of MA-21. The scoping letter also offers a mitigation measure to avoid these stands, but it is still very unclear how this mitigation measure will impact the project proposal. Better clarification is needed to actually identify potential moose wintering habitat in the prosed harvest units.

How will various units be impacted and what is actually going to be done to protect moose wintering habitat outside of MA-21? I agree with the idea of avoiding timber harvest in stands that actually meet moose winter range requirements (i.e. understory yew under older forest canopies) regardless if they have been previously identified as MA-21. I would not limit protection of such stands to slopes under 35%. Please clarify which harvest units have these conditions and how each unit will be modified in the environmental assessment. ([4-32])

Response: No treatments in MA 21 was documented in the scoping documented in error; at this time there was about 35 acres of harvest planned in MA 21 (also in accordance with the Forest Plan standards for MA 21). As the EA developed, the treatment in MA 21 dropped to approximately 3 acres of harvest (both regeneration and intermediate). There is approximately 1,818 acres of MA 21 in the Green Horse project area. A modelled run for grand fir of the size of 15 dbh or greater was conducted as an analysis for other potential habitat in the area besides MA-21. The query totaled an additional 6,009 acres of potential habitat that is outside of MA-21. The query does not account for any potential presence of an understory, so Pacific yew is not determined in this information.

100. The retention of on-site, coarse woody debris is important for a variety of reasons. There are a number of species that benefit from logs, trees, boles, and other large pieces of wood lying on the ground. Coarse wood debris also reduces erosion by trapping sediment and run-off and helps maintain soil nutrient capital. The microclimates created by coarse woody debris are often critical to the regeneration of desired trees and vegetation because the removal of overstory trees during logging operations increases solar radiation and reduces soil moisture. We recommend retention of the following amounts of on-site coarse woody debris:

*see table in letter on page 5**([6-4])

Response: Coarse woody material would be retained as documented in Table 2 of the EA; number SR-7.

101. The proposed action states that there is no habitat for candidate, threatened or endangered species within the project area. This is an oversight. There is suitable habitat for grizzly bears in the project area. There are at least two confirmed occurrences of grizzly bears on the Nez Perce-Clearwater National Forests in recent years. In 2007, a grizzly bear was mistakenly shot in Kelly Creek on the North Fork Ranger District, and in 2019, a collared grizzly bear ventured into the Selway-Bitterroot Wilderness. A possible third grizzly bear was photographed on a game camera in the nearby Newsome Creek Drainage. Accordingly, the Forest Service should prepare an effects analysis for grizzly bears. Although outside the scope of this project, we also recommend that the Nez Perce-Clearwater National Forests adopt an order for the proper storage of bear attractants on the forest. ([6-9])

102. Grizzly bears have been observed in the Nez Perce National Forest and the Fish and Wildlife Service have notified you that you should be consulting on projects. Have you done that? Such extensive roadwork and burning will impact grizzlies. ([10-34])

Response: The grizzly bear is not analyzed because the bear is not considered present on the Forest (document 24-006).

- 103. It is unclear that the Forest Service would comply with the Nez Forest Plan as it pertains to fisher, which is a management indicator species for this forest, as well as a regional sensitive species. Habitat would be reduced by 1,851 acres. ([6-10])
- 104. As with most of the Sensitive wildlife, fishers receive little habitat protection emphasis in the Forest Plan. There needs to be an environmental analysis that analyzes and discloses the direct, indirect or cumulative impacts on important habitat components, such as snags, logs, foraging habitat configuration, connectivity, cover, prey species impacts, etc. The FS simply has no conservation strategy for this species. ([10-32])

Response: The Sauder 2014 fisher habitat model incorporate the habitat components (canopy cover, fisher occurrence, continuity, diversity and abundance of prey, and other features that are important for reproduction and thermoregulation (Sauder and Rachlow, 2014). See the direct, indirect, and cumulative effects to fisher habitat in EA (p. 29-30)

105. The Tribe requests that the Forest adequately assess impacts of the Proposed Action and any alternatives to wildlife and plants, including understory vegetation conditions and old growth stands (outside of Management Area 20), using the best available scientific information. ([3-14])

Response: The wildlife analysis is in the EA where impacts of the Proposed Action to sensitive and Forest Plan management indicator species were analyzed. There are two sensitive plants that are known in the project area; although some individuals may be negatively impacted, populations of both are likely to benefit from treatment. Potential habitat exists for other species, but no occurrences have been documented in the project area. Understory vegetation conditions throughout treatment areas will experience some degree of impact ranging from minor impacts to individuals to a reset to early seral species. Over time, through natural succession, it is anticipated that these impacts will be minimal. There is no proposed harvest in MA 20 or stands being managed for old growth.

106. The Tribe recommends that the Forest evaluate potential impacts to wildlife and plants from burn treatments that would be allowed to extend beyond unit boundaries. ([3-18])

Response: Effects of the proposed prescribed landscape burning on wildlife habitat is documented in the EA. As long as resource objectives are met implementing the proposed action with design features and mitigation measures applied, effects would still be within those documented in the effects analysis in the EA. Populations of the two known sensitive plant species within the project area are likely to respond positively to low-moderate severity burning that may leave the units, though some individuals may be negatively impacted. Although potential habitat for additional species exists, there are no documented occurrences. Should additional species be documented during field visits, layout or implementation, appropriate mitigation measures will be put in place (this is enforced by mandatory contract provisions).

Aquatics

107. Skyline and especially tractor logging systems are more invasive and less in alignment with the 1997 Biological Assessment and the 1998 Biological Opinion for Land and Resource Management Plans for National Forest and Bureau of Land Management Resource Areas in the Upper Columbia River Basin and Snake River Basin Evolutionary Significant Units. Federal actions in the

Selway River drainage should comply with the following mitigative measures: "Only use timber harvest methods (such as helicopters, horses, etc.) that result in low levels of ground disturbance or that avoid adverse effects to steelhead." (National Marine Fisheries Service, Northwest Region, (1998), Biological Opinion for Land and Resource Management Plans for National Forests and Bureau of Land Management Resource Areas in the Upper Columbia River Basin and Snake River Basin Evolutionarily Significant Units.) ([3-31])

Response: Timber harvest would not adversely affect steelhead or their habitat due to the retention of PACFISH buffers in combination with tree and downed wood retention within the harvest units. Local monitoring (USDA 2016) has shown that the buffers prevent sediment delivery to streams from harvest activities.

108. Please complete an upward trend analysis for Island Creek and any other streams not currently meeting Forest Plan standards. Your analysis must include the impact of the Wash Creek wildfire. Instream data that displays an actual improvement over time is necessary to demonstrate a positive upward trend. ([4-35])

Response: The forest has completed an upward trend analysis for Island Creek that is consistent with forest plan guidance. The analysis can be found in the EA under Appendix A.

109. The 1998 Biological Opinion (BiOp) from NMFS (NOAA Fisheries) was done for listed species as part of consultation on Forest Plans. The BiOp came up with explicit direction to protect steelhead habitat in the Selway drainage, which contains a population unaffected by hatchery fish. The Forest Service alleges it will meet the intent of this BiOp, even though the agency proposes to violate it. proposed action at 27 and 28. That is unacceptable. We anticipate an EA that will discuss existing conditions for the streams at issue. ([10-27])

Response: The Green Horse Project will follow the guidelines presented in the 1998 Biological Opinion from NMFS. The EA lists the relevant guidelines from the 1998 BiOp and explains how the Green Horse Project meets the intent (EA. pp. 70-71). The forest included the existing condition of relevant streams in the EA (pp. 56-58).

Watershed

110. Page 22 of the Proposed Action states that there will be no effect to threatened bull trout and steelhead or designated critical habitat from this federal action. In support of this statement, the Forest makes a general reference to modeling results demonstrating no measurable sediment will adversely impact streams. Please provide more detailed information regarding the data used, date and type of analysis performed, and conclusions made to support the Forest's determination. ([3-30])

Response: Effects analysis shows that sedimentation quantities will be within allowable levels and tolerances for the Forest Plan Watersheds affected by proposed activities (EA pp. 51-54).

111. Operations on such steep slopes can lead to increased ground disturbance and sedimentation? ([4-4)

Response: We agree that the slope steepness is a strong control on erosion. The Green Horse Project will include the standard set of Design Features (document 11-004) and Mitigation Measures to limit sedimentation potential from harvest. Key provisions include limiting skidding to slopes 35% and less and ground based harvest to slopes 45% or less, retaining coverage of coarse woody debris following project activities, and obliterating skid trails and swing trails following project activities

112. Please complete a sediment analysis for all seven Forest Plan watersheds using appropriate tools such as the NEZSED model and a summary of any available instream data such as cobble embeddedness. ([4-33])

Response: The EA includes outputs of the NEZSED model and available data on existing condition. Model data inputs and supporting materials will be in the project record for review (EA p. 55-56; document 28-004).

113. Please complete an appropriate evaluation of the existing ECA and road density for all seven Forest Plan drainages. According to the National Marine Fisheries Service (1998) an existing ECA (equivalent clearcut acres) of less than 15% is generally indicative of good or high-quality stream condition, 15-20% is considered indicative of moderate quality stream condition and ECA of greater than 20% is indicative of low or poor-quality stream condition in HUC 6 watersheds. The 30% ECA value you cite in the scoping document only applies to small zero and first order headwater sub-basins located within the larger 6th Code HUC watersheds (NMFS 1998). Similarly, road densities of less than 1 mile per square mile is considered high-quality, 1 to 3 miles per square mile is considered moderate-quality and greater than 3 miles per squaremile is considered low-quality.

It is not appropriate to utilize large drainages HUC-12 watersheds such as Glover Creek -Selway River as your analysis area for ECA and road density. Using such large drainages will tend to diluted the impacts to the seven drainages identified in the Forest Plan. ([4-34])

Response: The ECA analysis and watershed conditions summary following the NMFS 1998 matrix for categorizing aquatic habitat condition is located in the EA (p. 50). One note of clarification, for classifying watershed size. The NFMS guideline recommends analysis be completed at 6th Level HUC or the Subwatershed-scale, not 6th Code HUCs. With the more recent upgrade in USGS coding of US Watersheds, sixth level HUCs are more correctly and technically referred to as 12th Code HUCs (HUC 12), which are classified by USGS as subwatersheds. HUC 12 watershed are 6th level watersheds, which is what the NMFS matrix recommends for assessing watershed condition. Forest Service Resource Specialists frequently using the older designation of HUC 6 and the more updated reference for subwatersheds of HUC 12 interchangeably, which adds to the terminology confusion. We should be using the more updated term, HUC 12 to denote a Subwatershed and will try to be more rigorous about this in the future. In general, with the USGS updated digital coding the boundaries of the subwatersheds on the Nez Perce-Clearwater did not change. For reference and further explanation on the updated coding system please refer to these USGS website for clarity: https://www.usgs.gov/core-sciencesystems/ngp/national-hydrography/watershed-boundary-dataset?qtscience support page related con=4#qt-science support page related con and this explanation put together by the NRCS on the change in coding is also helpful: https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/water/watersheds/dataset/?cid=nrcs143 02162 3

114. According to the Watershed Condition Framework (2011), the Horse Creek Watershed is "functioning at risk". The Forest Service should discuss the significance of this classification and the Watershed Condition Framework in the environmental analysis. Furthermore, the Forest Service should consider whether or not there are watershed restoration activities, such as road decommissioning, that could be implemented in Horse Creek to move watershed conditions from Condition Rating 2 to Condition Rating 1. Horse Creek is a tributary of Meadow Creek, which is critically important from a fisheries perspective for reasons that the Forest Service is aware. Any opportunities to improve watershed conditions in Horse Creek should be given serious consideration because restoration work implemented in Horse Creek would also likely benefit Meadow Creek and its fisheries. ([6-8])

Response: Implementation of the recommendations of the Watershed Condition Framework is outside the scope and purpose of the Green Horse project.

115. The logging and burning would occur in the Selway watershed, including Meadow Creek. This is a special place and needs to be treated as such. The impacts to the Selway River need to be considered as well as impacts to Meadow Creek and O'Hara Creek. ([10-2])

Response: The spatial extent of the analysis of effects includes the following subwatersheds: O'Hara Creek, Glover Creek-Selway River, Horse Creek, and Upper American River. The activities are not planned at a scale that are predicted to have downstream impacts on Meadow Creek. However, impacts to O'Hara Creek have been analyzed in the EA (p. 51); haul down O'Hara to the Selway road is not likely.

116. Extensive roads will be reconstructed and new roads will be built, supposedly temporary. Although the road built in a roadless area for the Orogrande timber sale was supposed to have been temporary, so far, to our knowledge, it has not been decommissioned. See FOC letter (Nov. 1 2019) to Regional Forester and Nez Perce-Clearwater Forest Supervisor Re: temporary roads and roadless areas. We are concerned that these socalled temporary roads will be on the landscape for a considerable amount of time causing watershed and soils damage the agency has not considered. Thus, we question the assumption made in the PA. ([10-26])

Response: Page 9 of the proposed action in the EA describes temporary roads. "Approximately 2.3 miles of new temporary road construction would occur to facilitate harvest. Temporary roads would be constructed on or near ridge tops with no stream crossings and would be hydrologically disconnected from any stream network. All temporary roads would be obliterated after use. Some temporary roads may over-winter if needed to access activity fuel treatment and/or reforestation areas. These roads would be hydrologically stable until use and obliterated once fuels treatment and reforestation needs are met. Obliteration would eliminate future motorized use of the road, and would restore hydrological function and soil productivity by ensuring that the road has adequate drainage and ground cover to prevent erosion". Project work includes revegetation, an effort that will be facilitated if the temporary roads remain. Forest Siliviculture Specialists anticipate that revegetation work will be concluded five years after the final harvest activities. KV funds are proposed as the mechanism to ensure payment for the recontour of temporary roads.

Soils

117. The Tribe also recommends adding a mitigation measure to minimize impacts to soils when conducting site preparation and prescribed burning. ([3-13])

Response: Thank you for your recommendation. All project effects to the soil resource are expected to remain within the 20% detrimental soil disturbance (DSD) threshold required by the Nez Perce Forest Plan, and the current proposed design features and mitigation measures will help to ensure that impacts to soils are minimized. However, additional mitigation measures, such as SR-2 (piling areas of high slash accumulation) and SR-5 (controlling the size of slash piles) have been added to ensure Forest Plan compliance.

118. Why is ground-based equipment being allowed on slopes between 35 and 45%, when past tractor logging is appropriately limited to slopes under 35%? When heavy equipment operates on such steep slopes it is often necessary to construct excavated skid trails that cause unnecessary resource damage and there is a much greater risk to the safety of operators. ([4-3])

Response: Ground-based equipment is allowed on slopes between 35 and 45% only where it is determined that soils will be protected, and erosion risk minimized. One way that this is accomplished is

through the implementation of shovel logging as an alternative harvest system. Ongoing forest monitoring shows that shovel logging on steeper slopes poses less risk of ground disturbance and sedimentation than tractor skidding, as excavated skid trails are unnecessary for this harvest system, and the ground-based equipment makes fewer passes over the soil. Tractor skidding will continue to only be allowed on slopes less than 35% in gradient, as stated in mitigation measure SR-8. These slope limitations are used in conjunction with soils analysis of detrimental soil disturbance (DSD), which is a standard measure of soil disturbance indicators, including erosion. As such, the project complies with the Nez Perce National Forest Plan and the Idaho Forest Practices Act. Additionally, please refer to the project design features, which provide standardized protections for the soil resource during logging activities (document 11-004).

- 119. Please meet the Regional standard of 15% Detrimental Soil Disturbance in all units. The Forest Plan standard of 20% is no longer appropriate given current Regional direction. ([4-36])
- 120. The PA also states it will meet the Forest Plan requirement for Detrimentally Disturbed Soils. PA at 23. However, the Forest Plan requirement allows 20% DSD by the direction from the regional office only allows 15%. Thus, we question whether soils will be maintained. ([10-28])

Response: The National Forest Management Act of 1976 (NFMA) requires that Forests adhere to established Forest Plan standards. All project activities are expected to remain within the 20% DSD threshold as required by the Nez Perce National Forest Plan, thereby complying with NFMA regulations. The Region 1 Soil Management Forest Service Manual Supplement provides agency-specific *guidance* on how to comply with applicable law and policy; individual Forests must still comply with their specific land management plans. The project design features and mitigation measures will help to ensure that soil disturbance resulting from project activities is minimized (document 11-004 and EA pp. 11-12).

Invasive Species

121. The Tribe recommends additional consideration for invasive species treatment and prevention in the Project area given the presence and proximity to a variety of highly competitive invasive plants. The concern for spreading invasive species is increased due to the presence of an active cattle allotment. Roadside brushing can increase area available for invasive species establishment and should be completed only when necessary and be followed by treatment and or seeding of native grasses and forbs. ([3-26])

Response: Roadside spot treatments are typically completed where necessary to mitigate for the spread of invasive species along roadsides in active timber sales. Furthermore, all equipment is required to be cleaned and inspected prior to entering the timber sale. Seeding of approved species is completed along closed temporary roads, skid trails, and landings after harvest activities have ended.

122. Vehicles and equipment serve as vectors for the spread of noxious weeds when proper inspection and cleaning are not practiced to limit their spread. Disturbed soil should be stabilized and seeded with native vegetation to prevent erosion and expansion of noxious weeds. All equipment should be inspected, cleaned, and washed prior to the operator entering public lands. Work crews trained in noxious weed recognition and removal should patrol the project area and mechanically remove any weeds or trash. The Forest Service should use this opportunity to restore native vegetation, and ICL recommends the use of all native species in the project area, especially areas that have direct associations with temporary roads and/or skid trails. ([6-11])

Response: Timber sales contract provisions do require that all equipment is cleaned and inspected off-site prior to the start of logging operations to reduce the likelihood of invasive species introduction to an area. After harvest activities are completed, seeding of approved species is done along closed temporary roads, skid trails, and landings. Any weed establishment will be recorded and treated as necessary.

Climate Change

- 123. The PA does not address the concern about climate change. Research from Oregon State University shows that logging is the largest contributor to greenhouse gases in Oregon. This project will log over 1,500 acres and contribute to global warming.

 The FS cannot avoid discussing the project's impacts on climate change by stating the project would have a miniscule impact on global carbon emissions. The obvious problem with that viewpoint is, once can say the same thing about every source of carbon dioxide and other greenhouse gas emission on earth, and likewise justify inaction. In their comments on the KNF's Draft EIS for the Lower Yaak, O'Brien, Sheep project, the EPA rejected that sort of analysis, basically because that cumulative effects scale dilutes project effects. See Lower Yaak, O'Brien, Sheep FEIS pp. 818-19. ([10-37])
- 124. We expect a comprehensive cumulative effects analysis on this point because the Forest Service has ramped up timber sales so much in the past ten years. ([10-40])

Response: The proposed action would not have a measurable impact on carbon stocks in either the short nor long term, because the area of treatment is a small fraction relative to regional and global carbon stocks. In the short term, the proposed action would remove some carbon currently stored in live biomass by cutting timber in the treatment units. In the proposed action, slightly more carbon would be stored in wood products than in biomass. In the long term, the forest will regrow and accumulate carbon, thus acting as a carbon sink. The proposed reforestation in the proposed action would help ensure these forest stands return to a carbon sink as quickly as possible. The affected forest lands in this proposal would remain forests, not be converted to other land uses, and long-term forest ecological systems and benefits would be maintained. As such, the long term cumulative effects of forest management will have little impact overall on a potential future scenario of carbon accumulation and loss. See the carbon cycling and storage analysis located in the project record for more details.

125. The Forest Service must consider that, because of warming temperatures, recovery may be different than what the agency could once expect. ([10-38])

Response: In the short term, the proposed action would remove some carbon currently stored in live biomass by cutting timber and prescribed burning in the treatment units. A substantial portion of this carbon would remain stored for a period of time in wood products (Depro et al. 2008, U.S. Environmental Protection Agency 2010), reducing some of the carbon emitted through decomposition. In the proposed action slightly more carbon would be stored in wood products than in biomass.

126. What kind of carbon storage value will the Forest Service lose by logging this area? ([10-39])

Response: In the short term, the proposed action would remove some carbon currently stored in live biomass by cutting timber in the treatment units. A substantial portion of this carbon would remain stored for a period of time in wood products, reducing some of the carbon emitted through decomposition. In the long term, the forest will regrow and accumulate carbon, thus acting as a carbon sink. Reforestation in any action alternative would help ensure these forest stands return to a carbon sink as quickly as possible. In the long term, the forest will regrow and accumulate carbon, thus acting as a carbon sink. The proposed reforestation in the proposed action would help ensure these forest stands return to a carbon sink as quickly as possible.

Roads

127. The Tribe appreciates the placement of temporary roads on ridgetops and decommissioning them after use. The Tribe encourages the Forest to minimize their construction to the greatest

extent possible. A full recontour of these roads is recommended consistent with the practices reflected in the partnership between the Tribe and the Forest. ([3-20])

Response: The Forest will be incorporating the standard design features (document 11-004) and the proposed action include mitigation measures (EA pp. 11-12) that require that all temporary roads and skid trails be fully recontoured at the completion of project activities.

128. The Project area contains a number of roads with high erosion and failure potential. These problem roads should be improved to a condition to reduce failure risk as well as decrease erosion detrimental to fish and water quality. ([3-21])

Response: The Forest agrees that some roads will require increased drainage features and stabilization to ensure that sedimentation risks from roads-either chronic erosion or sedimentation from mass failure are mitigated to the extent practicable. Road mitigations during reconstruction and reconditioning include the following: the addition of cross drain structures near stream crossings, application of surface aggregate gravel materials, road realignment or reshaping, and placement of roadway fill and installation of new signs or gates. Other activities could include installation of drainage dips, road blading, brushing and removal of obstructions.

129. The Tribe recommends that the Forest use Geomorphic Road Analysis and Inventory Package ("GRAIP") to inventory roads within the sale area (including all haul roads) prior to improvement activities to ensure the highest priority and contributing segments are addressed. ([3-22])

Response: We agree that GRAIP can be a useful tool for understanding where sedimentation from roads poses the greatest risk to water quality and the model output also helps in the communication regarding roads and sediment. For Green Horse, we do not plan to use GRAIP because our confidence level is high that with some field time, we will identify our highest risk road-sediment areas. At least, in part, one of the benefits of GRAIP is that is populating the model requires Specialists to thoroughly survey roads by walking the roads and recording information about road drainage and issues. The Forest found that when water resource specialists are able to spend time in the field to survey roads, even without collecting the full suite of data required for GRAIP, that Water Resource Specialists identify nearly identical areas of concern for drainage and erosion as produced by the GRAIP model output. Given our primary concern for the Green Horse project is first identifying and then deciding how to reduce and mitigate sedimentation along the road prior to project activities, we believe dedicating resource specialist time to road survey with this goal in mind will be a more effective approach for achieve project goals.

130. Please report current road conditions in the Environmental Analysis and how those conditions will change as a result of the proposal. ([4-11])

Response: The transportation report with the roads analysis (document 14-003) documents the current condition of roads and the proposed action on roads.

- 131. The Tribe urges the Forest to consider using road decommissioning as a tool to remove problem roads which are not currently used and are not planned for use in future management activities. This would be a good time to obliterate these unused roads as there is a backlog of unused roads thus eliminating maintenance and erosion potential in this sensitive watershed. Please fully recontour as many unused roads and leave all roadside vegetation where it falls to increase infiltration and reduce sediment delivery from roads. ([3-29])
- 132. AFRC supports the proposed road work on the sale which includes road reconditioning on approximately 20 road miles, road reconstruction on 19 miles, construct 2 miles of temporary roads, and obliterate all temporary roads. AFRC would like to remind the Forest that an intact

road system is critical to the management of Forest Service land, particularly for the provision of timber products. Without an adequate road system, the Forest Service will be unable to offer and sell timber products to the local industry in an economical manner. The road decommissioning proposed in the Green Horse scoping notice likely represents a permanent removal of these roads and likely the deferral of management of those forest stands that they provide access to. The land base covered in the Green Horse project area are to be managed for a variety of forest management objectives. Removal of adequate access to these lands compromises the agency's ability to achieve these objectives and is very concerning to us.

We would like the District to carefully consider the following three factors when making a decision to decommission any road in the project area:

- 1. Determination of any potential resource risk related to a road segment
- 2. Determination of the access value provided by a road segment
- 3. Determination of whether the resource risk outweighs the access value (for timber management and other resource needs).
- 4. We believe that only those road segments where resource risk outweighs access value should be considered for decommissioning. ([5-7])

Response: We do not have road decommissioning beyond the recontour of newly constructed temporary roads proposed as a part of the Green Horse project but will consider watershed restoration opportunities as separate projects. Decisions about road decommissioning are made as a part of a transportation planning process that considers future management needs of the road, current use, and impacts to resources (document 14-003). Additional roads were identified to maintain for resource benefits (Roads 9714 9additional segment not needed for haul), 9709, and 9709A) and added to the proposed action. An alternative has been considered that includes decommissioning roads that are not currently used, roads not needed for future management, and/or roads with hazard trees; but has was not analyzed in detail.

133. Has the Forest Service looked at simply closing or decommissioning some of the roads it has represented to be hazard roads? ([10-1])

Response: This was alternative to the proposed action that was considered but eliminated from detailed study because the project interdisciplinary team documented a roads analysis that resulted in project area roads to be needed for future management including but not limited to providing access to manage plantations, fire suppression, etc. Future management of this area is needed and is directed by Forest Plan management areas 12, 16, 17 to manage timber production while providing for other multiple uses and resources that also includes improving the quality of winter range for big game by timber harvest and prescribed burning.

Economics

134. AFRC believes the Forest should take this opportunity to treat as many acres in the Green Horse Project as possible. While the Forest is planning on treating 1,693 acres commercially this only represents about 18% of the project area. There are multiple compelling reasons for keeping more management options open including the possible need to treat more heavy fuel loadings, further spread of the hemlock looper infestation, and the fact that the forest products industry in the area is dependent on the volume from projects like this one.

AFRC members depend on a predictable and economical supply of timber products from Forest Service land to run their businesses and to provide useful wood products to the American public. This supply is important for present day needs but also important for needs in the future. This future need for timber products hinges on the types of treatments implemented by the Forest Service today. Of particular importance is how those treatments effect the long-term sustainability of the timber resources on Forest Service managed land. AFRC has voiced our concerns many times

regarding the longterm sustainability of the timber supply on Forest Service land and how the current management paradigm is affecting this supply. While the treatments on the Green Horse project are unlikely to directly address this long-term sustainability concern, they will likely provide short-term products for the local industry and we want to ensure that this provision is an important consideration for the decision maker as the project progresses. As we will discuss later in this letter the importance of our members' ability to harvest and remove these timber products from the timber sales generated off this project is paramount. Studies by the University of Idaho have shown that as many as 18 direct and indirect jobs are created for every million board feet of timber that is harvested. The volume harvested in this project will greatly help the industry and surrounding communities. ([5-5])

Response: Within the areas considered for this project as many treatable acres were proposed as possible while still meeting the provisions of the forest plan and taking into account the economic feasibility of the project.

135. The primary issues affecting the ability of our members to feasibly deliver logs to their mills are firm operating restrictions. As stated above, we understand that the Forest Service must take necessary precautions to protect their resources; however, we believe that in many cases there are conditions that exist on the ground that are not in step with many of the restrictions described in Forest Service EA's and contracts (i.e. dry conditions during wet season, wet conditions during dry season). We would like the Forest Service to shift their methods for protecting resources from that of firm prescriptive restrictions to one that focuses on descriptive end-results; in other words, describe what you would like the end result to be rather than prescribing how to get there. There are a variety of operators that work in the Nez Perce-Clearwater market area with a variety of skills and equipment. Developing an EA and contract that firmly describes how any given unit shall be logged may inherently limit the abilities of certain operators. For example, restricting certain types of ground-based equipment rather than describing what condition the soils should be at the end of the contract period unnecessarily limits the ability of certain operators to complete a sale in an appropriate manner with the proper and cautious use of their equipment. To address this issue, we would like to see flexibility in the EA and contract to allow a variety of equipment to the sale areas. We feel that there are several ways to properly harvest any piece of ground, and certain restrictive language can limit some potential operators. Though some of the proposal area is planned for cable harvest, there are opportunities to use certain ground equipment such as fellerbunchers and processors in the units to make cable yarding more efficient. Allowing the use of processors and fellerbunchers throughout these units can greatly increase its economic viability, and in some cases decrease disturbance by decreasing the amount of cable corridors, reduce damage to the residual stand and provide a more even distribution of woody debris following harvest. Tethered-assist equipment is also becoming a more viable and available option for felling and yarding on steep slopes. This equipment has shown to contribute little additional ground disturbance when compared to traditional cable systems. Please prepare your NEPA analysis documents in a manner that will facilitate this type of equipment. AFRC is pleased to see that ground skidding on this project will be allowed on sloped up to 45%. ([5-6])

Response: The Nez Perce Clearwater National Forest has been and is continuing to focus on outcomes when developing design features and mitigation measures. This is evident in recent revisions to Design Features (document 11-004) and mitigations measures (EA Table 2) used on the Forest. Also, the Forest is currently partnering with OSU to analyze and monitor the effects of the of tethered logging on active timber sale.

136. The ICNRP 2016 pages 8 and 9 discuss the importance of economics to Idaho County. We would request at least a short section that covers present net value and economic benefits to rural

communities. ([8-2])

Response: These issues are addressed as a part of the economic analysis (EA pp. 61-62)

Roadless

137. Inventoried Roadless Areas ("IRAs") are generally considered the "reservoirs" of undeveloped lands within which future wilderness designations may be considered. Because the proposed harvest in the O'Hara-Falls Creek and West Meadow Creek IRA may render the area ineligible or undesirable or a new wilderness designation and will create visible openings and increase wildlife vulnerability, the Tribe recommends dropping the units within the O'Hara-Falls Creek and West Meadow Creek IRA. Furthermore, the Tribe would like to see the results of the Idaho Roadless Commission's fall 2019 meeting and any data and research related to harvesting in IRAs. ([3-27])

Response: The Green Horse project has been presented at the October 27, 2020 Idaho Roadless Commission meeting and was determined in compliance with the Idaho Roadless Rule. The treatments proposed along roads that fall within roadless areas would only remove dead and dying trees within falling or striking distance of improvements and/or the road. Retention would vary across units and be dependent upon the amount of dead and dying hazard trees within the unit. Areas with little-to-no mortality would have higher amounts of retention, while areas of high mortality will have lower areas of retention. These treatments would not affect the roadless areas eligibility for recommended wilderness. Notes approved by the Idaho Roadless Commission will be posted here by members of the Commission: https://species.idaho.gov/idaho-roadless-rule-commission/.

138. According to the scoping document there are 95-acres of regeneration harvest in the O' hara Falls Creek roadless area and 90-acres of regeneration harvest in the West Meadow Creek roadless area. White the activities may be within 150-feet of existing roads they are not of short duration and they will definitely impact the potential of the harvested areas to be considered as wilderness. The effects of regeneration harvest will last well over a 100-years at is unlikely that such areas would ever be considered as wilderness once they are harvested. Potential wilderness boundaries would only have to be shifted away from the proposed units and this would likely decrease the size of any future wilderness designation. Please drop all harvest in existing roadless areas. ([4-37])

Response: Regeneration harvest is not proposed within the roadless areas. Page 5 of the proposed action that was provided for the combined scoping and 30-day comment period and pages 8 of the EA describe salvage (intermediate) harvest to remove dead and dying trees that are within falling distance of the road. Cutting hazard trees from 150 feet or less next to existing forest roads would not significantly alter or impact the manageability of the any of these roadless areas since only a fraction of a percent of any individual area would be affected by the proposed activity. The roads proposed for hazard tree removal form partial boundaries for the roadless areas and would not affect the manageability of the roadless area at these boundaries (EA p. 66).

139. Approximately 180 acres of roadside salvage in Idaho Roadless Areas is proposed to remove dead and dying trees within falling or striking distance of the road. Its not clear which roads the Forest Service is talking about, but it looks like the roadside units in roadless areas are adjacent to roads 2116, 356, 464A, and 2103. The Forest Service should clarify where the roadside salvage units are located, which roads and roadless areas are implicated, and describe how the proposed treatments are consistent with the Idaho Roadless Rule. The Forest Service should also clarify if the associated roads are open to public travel or if the roads are only open to administrative use. We encourage the Forest Service to limit roadside salvage in roadless areas to units that are adjacent

to roads that are open to public travel. We encourage the Forest Service to drop units in roadless areas that are adjacent to roads that are only open to administrative use. Particularly where road conditions are currently impassible to vehicular use. ([6-6])

Response: The Green Horse project proposes roadside hazard tree removal (intermediate harvest) along Forest Roads 464, 464-A, 356, and 2013 (approximately 3.7 miles and 70 acres) within the O'Hara-Falls Creek roadless area and roadside hazard tree removal (approximately 5.7 miles and 108 acres) and Forest Road 2116 within the West Meadow Creek. The EA analyzes the effects to wilderness attributes (pp. 64-66) and the nine roadless characteristics are analyzed as well for conformance to the Idaho Roadless Rule (document 32-011). The cutting, sale, or removal of timber is permissible in Idaho Roadless Areas designated as Backcountry Restoration: vii) Where incidental to the implementation of a management activity not otherwise prohibited by this subpart (36 CFR Part 294.2(c)(1)(vii)). Removal of trees adjacent to forest roads within Idaho Roadless areas to create a fuel break and for public health and safety reasons is allowed. Specifically, this project proposes to remove trees adjacent to the roads within the roadless areas that are a hazard to the road described under the proposed action. The project meets the exception to the roadless rule because it is incidental to routine road maintenance. The project has been presented to the Idaho Roadless Commission and was determined in compliance with the Idaho Roadless Rule. An alternative that proposed no harvest in Idaho Roadless Areas was considered but not analyzed in detail (EA p. 13).

140. Court cases point to the necessity to do EISs that analyze the impacts to roadless area development. In National Audubon Society v. Lyons, 46 F.3d 1437 (9th Cir. 1993) the court ruled: The Audubon Society alleges the Forest Service completely ignored the roadless nature of the timber sales when it prepared the environmental assessments. In its defense, the Forest Service repeats its argument that, under the OWA, it was not required to consider the roadless nature of the four timber sales. We again reject this argument, and we agree with the district court that the decision to harvest timber on a previously undeveloped tract of land is "an irreversible and irretrievable decision" which could have "serious environmental consequences." See California v. Block, 690 F.2d 753, 763 (9th Cir. 1982). National Audubon at 1448. Here the Ninth Circuit reaffirms that logging in roadless areas is irreversible and irretrievable. Time and time again, the courts and agency policy have decreed that roadless area logging is a major federal action requiring analysis of the impact on logging of the area's roadless values through EIS. California v. Block, Smith v USFS, National Audubon v. Lyons, Tenakee Spring v. Block, and ICL v. Mumma are only some of the decisions that reach this conclusion. In this case, an EA rather than an EIS is proposed.

The PA at states, "Effects to roadless characteristics and wilderness attributes per the Idaho Roadless Rule and Forest Service Handbook (FSH) 1909.12 (72.1) will be documented for the upcoming environmental assessment." Aside from the fact the Handbook reference is to the forest planning process, the point is the agency recognizes the need to document the impacts to roadless areas in a NEPA document. Given the overall size of the project and uncertain nature of roadless impacts (burning and logging), an EIS is the appropriate documentation. ([10-21])

Response: The Forest Service Handbook reference is correct, the roadless analysis consists of the wilderness characteristic as indicators (FSH 1909.12, Chapter 70, Section 72.1). The EA analyzes the effects to wilderness attributes (pp. 63-68) and the roadless characteristics are analyzed as well for conformance to the Idaho Roadless Rule (document 32-011).

141. We also note that this proposal is not consistent with the existing Forest Plan. The Forest Plan FEIS states on page I-17 (and elsewhere), "no road construction or timber harvesting activities will be implemented during the Plan period in the portion of the West Meadow Creek roadless area that is within the Meadow Creek drainage." Yet, logging is proposed for 90 acres in the roadless area

Response: The reference in the Nez Perce Forest Plan FEIS is under Alternative G1. The Nez Perce Forest Plan represents the Preferred Alternative in the Final EIS which is Alternative G that states: "road construction and timber harvest activities will not be scheduled in most of West Meadow Creek roadless areas for the Plan period (1988-1997)". The Nez Perce Forest Plan on page II-4 under "Objectives" also specifies where "most" harvest within the West Meadow Creek roadless area cannot occur; and that is within the Meadow Creek drainage. The proposed roadside hazard tree removal that is within the West Meadow Creek roadless area is within the Horse Creek drainage. Further, the Idaho Roadless Rule established the management direction for designated roadless areas in the State of Idaho. The "Roadless Area Conservation National Forest System Lands in Idaho Final Environmental Impact Statement' analyzed four alternatives, including 1) Direction based on the 2001 Roadless Rule (2001 Roadless Rule): 2) Direction based on existing forest plans (Existing Plans); 3) Direction based on the Petition, as presented to the Roadless Area Conservation National Advisory Committee (RACNAC) (Proposed Idaho Roadless Rule [Proposed Rule]); and 4) Direction based on modifications to the Proposed Idaho Roadless Rule (Modified Idaho Roadless Rule [Modified Rule]). Direction based on existing Forest Plans was analyzed in detail, but the final rule established Idaho Roadless Areas as described in Alternative 4. The Idaho Roadless Rule supersede Forest Plans. This means that all activities proposed in Idaho Roadless Areas must comply with the Idaho Roadless Rule, regardless of Management Area direction for the area in the Forest Plan. However, Forest Plans may contain additional management restrictions on activities within IRAs to meet Management Area objectives for other resources.

142. The proposal excludes any larger roadless expanse, including land at the head of Lick Creek. In Kettle Range Conservation Group v. USFS, 971 F. Supp 480 (D. Or,1997) the court again held logging in roadless areas, including ones that are uninventoried, is an "irretrievable commitment of resources." It is what is on the ground that counts. The agency needs to determine whether the proposed logging, such as at the head of Lick Creek in units 17A and B is within the larger roadless expanse. ([10-24])

Response: Portions of Green Horse units 17A and 17B are along year-round open system roads where harvest is proposed within 150 feet of the road. The Lick Point roadless area is outside of the Green Horse project area and the Idaho Roadless FEIS (USDA 2008) describes this roadless area being completely surrounded by roads. Thus, the Lick Point roadless area was not considered for the roadless analysis in the Green Horse EA. This small area identified in your comment is outside the Lick Point roadless area boundary and it does not have the wilderness attributes or roadless characteristics; because this small area is interrupted by system roads, at any point within this small area there is a road about a ½ mile away; and this area would not substantially contribute to the large acreage that was already designated by the Idaho Roadless Rule. Roadless management direction prior to 2009 is not applicable to Idaho because the Idaho Roadless Rule supersedes any other roadless area direction. The Idaho Roadless FEIS analyzed all acres in the state of Idaho for roadless characteristics and then the Idaho Roadless Rule designated the roadless boundaries. (The area in question here is the headwaters of American River. As for Lick Creek, all except for the bottom 0.5 mile of Lick Creek is within the Lick Point Idaho Roadless Area.)

Cultural Resources

143. The Tribe expects that the Forest will share the results of the Proposed Action archaeological survey with the Tribe's technical staff and provide them the opportunity to comment on the results. The Tribe also expects that the six previously identified archaeological sites, as well as any sites discovered during the survey yet to be conducted for this Project, will be evaluated under all four National Register Criteria, not just under Criterion D, scientific value. ([3-32])

Response: The Forest routinely shares the results of its archaeological findings with the Tribe. The Forest will evaluate cultural properties following Stipulation V(C) of the North Idaho Programmatic Agreement.

144. The Tribe should also be provided the opportunity to conduct an ethnographic study to identify and evaluate any historic sites of religious and cultural significance to the Tribe in the Project area. The Tribe does not believe that the Forest Programmatic Agreement with the Idaho State Historic Preservation Office is appropriate to address these resources ([3-33])

Response: The Forest does not fund the Tribe to conduct rote ethnographic studies. If the Tribe would like to conduct these studies on their own – the Forest would appreciate a copy of those results.

145. The Tribe should be consulted on the most appropriate way to avoid damage to eligible historic properties. Buffering the site to create an exclusion zone may not adequately protect the values that make the sites significant to the Tribe. ([3-34])

Response: There are no eligible historic properties that are proposed to be damaged by the Green Horse Project.

Beyond Scope

146. The area is part of the Horse Creek experimental watershed. How might this affect the suitability of that area for study, especially since the control watershed might be affected by the logging? ([10-20])

Response: The Horse Creek drainage was designated as an administrative research area that assessed the impacts of forest management activities. This area is no longer a research area and the analysis documents no direct or indirect effects to Horse Creek (EA pp. 53, 55-56).

147. The Selway is a wild and scenic River and the vast majority of this proposal is within watersheds that drain into the Selway. Further, Meadow Creek is an eligible river (wild) in the Nez Perce National Forest plan. ([10-13])

Response: No project activities are proposed with any wild and scenic river corridors.

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